Milliman

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December 2013

Applegate Valley Rural Fire Protection District #9/2664
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Applegate Valley Rural Fire Protection District #9/2664

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Applegate Valley Rural Fire Protection District #9 -- #2664

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Applegate Valley Rural Fire Protection District #9 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Applegate Valley Rural Fire Protection District #9.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Applegate Valley Rural Fire Protection District #9

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.23%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.27%)	(0.27%)	(0.27%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.56%**	**7.69%**	**11.79%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.12%**	**8.17%**	**12.27%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 102%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.99%	10.99%
Minimum July 1, 2015 Rate	7.99%	4.99%
Maximum July 1, 2015 Rate	13.99%	16.99%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,368,895	$1,038,074	($330,821)	132%	$405,303	(82%)
12/31/2008	1,108,730	1,158,031	49,301	96%	431,829	11%
12/31/2009	1,275,751	1,295,350	19,599	98%	421,258	5%
12/31/2010	1,418,875	1,380,228	(38,647)	103%	468,252	(8%)
12/31/2011	1,483,793	1,483,736	(57)	100%	461,525	0%
12/31/2012	1,735,182	1,708,530	(26,652)	102%	486,254	(5%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Applegate Valley Rural Fire Protection District #9

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($26,652)	($57)
Allocated pooled OPSRP UAL	34,273	7,875
Side account	0	0
Net unfunded pension actuarial accrued liability	7,621	7,818
Combined valuation payroll	486,254	461,525
Net pension UAL as a percentage of payroll	2%	2%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$10,202	$11,956

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$60,083	$55,378
Tier 1/Tier 2 valuation payroll	422,168	399,440
Tier 1/Tier 2 pension normal cost rate	14.23%	13.86%
Tier 1/ Tier 2 Actuarial accrued liability	$1,708,530	$1,483,736
Actuarial asset value	1,735,182	1,483,793
Tier 1/Tier 2 Unfunded actuarial accrued liability	(26,652)	(57)
Tier 1/ Tier 2 Funded status	102%	100%
Combined valuation payroll	$486,254	$461,525
Tier 1/Tier 2 UAL as a percentage of payroll	(5%)	0%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(0.27%)	(0.37%)
Tier 1/Tier 2 active members [1]	6	6
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	486,254	461,525
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$278,545	$244,160
2. Employer reserves	1,262,286	1,050,130
3. Benefits in force reserve	194,352	189,504
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,735,182**	**$1,483,793**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,483,793
2. Regular employer contributions	54,023
3. Benefit payments and expenses	(30,524)
4. Adjustments[2]	20,232
5. Interest credited	207,658
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,735,182**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$15,973	$16,177
Tier 1 General Service	0	0
Tier 2 Police & Fire	38,807	33,494
Tier 2 General Service	5,303	5,707
Total	**$60,083**	**$55,378**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$60,406	$60,083	($323)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$480,770	$414,867
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	633,486	485,048
▪ Tier 2 General Service	78,521	57,241
▪ **Total Active Members**	**$1,192,777**	**$957,156**
Dormant Members	188,244	181,923
Retired Members and Beneficiaries	327,509	344,657
Total Actuarial Accrued Liability	**$1,708,530**	**$1,483,736**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,627,134	$1,708,530	$81,396

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,708,530	$1,483,736
2. Actuarial value of assets	1,735,182	1,483,793
3. Unfunded accrued liability *(1. – 2.)*	(26,652)	(57)
4. Funded percentage *(2. ÷ 1.)*	102%	100%
5. Combined valuation payroll	$486,254	$461,525
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(5%)	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($26,652)	($1,929)
Total				**($26,652)**	**($1,929)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,483,736
b. Normal cost at December 31, 2011	55,378
c. Benefit payments during 2012	(30,285)
d. Interest at 8.0% to December 31, 2012	121,918
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,630,747
f. Change in actuarial accrued liability due to assumption, method, and plan changes	81,396
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,712,143
2. Actuarial accrued liability at December 31, 2012	1,708,530
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	3,613
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,483,793
b. Contributions for 2012[1]	54,023
c. Benefit payments and expenses during 2012	(30,524)
d. Interest at 8.0% to December 31, 2012	119,643
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,626,935
5. Actuarial value of assets at December 31, 2012	1,735,182
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	108,247
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$111,860**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($57)**
2. Expected increase	3,869
3. Liability (gain)/loss	(3,613)
4. Asset (gain)/loss	(108,247)
5. Change due to changes in assumptions, methods, and plan provisions	81,396
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($26,652)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$15,973	$104,981	15.22%	$16,177	$99,123	16.32%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	38,807	269,927	14.38%	33,494	256,151	13.08%
Tier 2 General Service	5,303	47,260	11.22%	5,707	44,166	12.92%
Total	**$60,083**	**$422,168**	**14.23%**	**$55,378**	**$399,440**	**13.86%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($26,652)	($57)
2. Next year's Tier 1/Tier 2 UAL payment	(1,929)	(2,310)
3. Combined valuation payroll	486,254	461,525
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.40%)	(0.50%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.23%	13.86%
b. Tier 1/Tier 2 UAL rate	(0.40%)	(0.50%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.96%	13.49%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.99%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.99%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.20%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	102%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.99%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.99%
7. July 1, 2015 total pension rate, before adjustment	13.96%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(0.40%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.40%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.96%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.23%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.23%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.23%	13.86%
b. Tier 1/Tier 2 UAL rate	(0.40%)	(0.50%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.96%	13.49%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$104,981	$104,981
Tier 2	47,260	269,927	317,187
Tier 1/Tier 2 valuation payroll	47,260	374,908	422,168
OPSRP valuation payroll	0	64,086	64,086
Combined valuation payroll	**$47,260**	**$438,994**	**$486,254**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	1	4	1	6	1	4	1	6
Total	1	5	1	7	1	5	1	7
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	2	2	N/A	4	2	4	N/A	6
Total	2	2	N/A	4	2	4	N/A	6
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	1	0	2	1	1	0	2
Total	1	1	0	2	1	1	0	2
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**5**	**8**	**1**	**14**	**5**	**10**	**1**	**16**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		1								1
35-39			1							1
40-44										
45-49			1							1
50-54				1						1
55-59			2							2
60-64										
65-69										
70-74										
75+										
Total	0	1	4	1	0	0	0	0	0	6

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	375
50-54		
55-59		
60-64	1	1,198
65-69		
70-74		
75+		
Total	2	787

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	2,079
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	2,079

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Yamhill County/2015
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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December 2013
Yamhill County/2015

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Yamhill County/2015

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Yamhill County -- #2015

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Yamhill County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Yamhill County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Yamhill County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.01%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(1.30%)	(1.30%)	(1.30%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.31%**	**6.66%**	**10.76%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.87%**	**7.14%**	**11.24%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 95%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$53,483,124	$38,797,756	($14,685,368)	138%	$19,196,097	(77%)
12/31/2008	39,730,256	42,184,835	2,454,579	94%	20,819,666	12%
12/31/2009	46,262,877	45,990,333	(272,544)	101%	21,770,669	(1%)
12/31/2010	50,594,864	50,082,170	(512,694)	101%	22,476,974	(2%)
12/31/2011	49,368,116	53,073,411	3,705,295	93%	21,695,391	17%
12/31/2012	55,280,975	58,352,215	3,071,240	95%	21,979,926	14%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Yamhill County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$3,071,240	$3,705,295
Allocated pooled OPSRP UAL	1,549,206	370,175
Side account	0	0
Net unfunded pension actuarial accrued liability	4,620,446	4,075,470
Combined valuation payroll	21,979,926	21,695,391
Net pension UAL as a percentage of payroll	21%	19%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$461,148	$562,030

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$1,583,581	$1,592,580
Tier 1/Tier 2 valuation payroll	12,172,009	12,668,214
Tier 1/Tier 2 pension normal cost rate	13.01%	12.57%
Tier 1/ Tier 2 Actuarial accrued liability	$58,352,215	$53,073,411
Actuarial asset value	55,280,975	49,368,116
Tier 1/Tier 2 Unfunded actuarial accrued liability	3,071,240	3,705,295
Tier 1/ Tier 2 Funded status	95%	93%
Combined valuation payroll	$21,979,926	$21,695,391
Tier 1/Tier 2 UAL as a percentage of payroll	14%	17%
Tier 1/Tier 2 UAL rate	(1.30%)	(0.86%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	204	222
Tier 1/Tier 2 dormant members	106	102
Tier 1/Tier 2 retirees and beneficiaries	166	148

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	21,979,926	21,695,391
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$7,652,215	$7,197,628
2. Employer reserves	34,752,379	31,094,709
3. Benefits in force reserve	12,876,381	11,075,779
4. Total market value of assets *(1. + 2. + 3.)*	**$55,280,975**	**$49,368,116**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$49,368,116
2. Regular employer contributions	736,353
3. Benefit payments and expenses	(2,022,327)
4. Adjustments[2]	282,640
5. Interest credited	6,916,193
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$55,280,975**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$263,485	$252,838
Tier 1 General Service	132,414	77,971
Tier 2 Police & Fire	276,871	261,165
Tier 2 General Service	910,811	1,000,606
Total	**$1,583,581**	**$1,592,580**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$1,589,169	$1,583,581	($5,588)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$8,275,784	$7,462,855
▪ Tier 1 General Service	2,401,482	1,851,364
▪ Tier 2 Police & Fire	4,548,118	3,370,634
▪ Tier 2 General Service	17,014,824	14,996,943
▪ **Total Active Members**	**$32,240,208**	**$27,681,796**
Dormant Members	4,413,526	5,247,696
Retired Members and Beneficiaries	21,698,481	20,143,919
Total Actuarial Accrued Liability	**$58,352,215**	**$53,073,411**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$57,043,379	$58,352,215	$1,308,836

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$58,352,215	$53,073,411
2. Actuarial value of assets	55,280,975	49,368,116
3. Unfunded accrued liability *(1. – 2.)*	3,071,240	3,705,295
4. Funded percentage *(2. ÷ 1.)*	95%	93%
5. Combined valuation payroll	$21,979,926	$21,695,391
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	14%	17%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$3,071,240	$222,296
Total				**$3,071,240**	**$222,296**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$53,073,411
b. Normal cost at December 31, 2011	1,592,580
c. Benefit payments during 2012	(2,006,496)
d. Interest at 8.0% to December 31, 2012	4,293,019
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	56,952,514
f. Change in actuarial accrued liability due to assumption, method, and plan changes	1,308,836
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	58,261,350
2. Actuarial accrued liability at December 31, 2012	58,352,215
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(90,865)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	49,368,116
b. Contributions for 2012[1]	736,353
c. Benefit payments and expenses during 2012	(2,022,327)
d. Interest at 8.0% to December 31, 2012	3,898,010
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	51,980,152
5. Actuarial value of assets at December 31, 2012	55,280,975
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	3,300,823
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$3,209,958**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$3,705,295**
2. Expected increase	1,267,067
3. Liability (gain)/loss	90,865
4. Asset (gain)/loss	(3,300,823)
5. Change due to changes in assumptions, methods, and plan provisions	1,308,836
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$3,071,240**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$263,485	$1,455,670	18.10%	$252,838	$1,408,914	17.95%
Tier 1 General Service	132,414	889,691	14.88%	77,971	853,140	9.14%
Tier 2 Police & Fire	276,871	1,764,028	15.70%	261,165	1,789,677	14.59%
Tier 2 General Service	910,811	8,062,620	11.30%	1,000,606	8,616,483	11.61%
Total	**$1,583,581**	**$12,172,009**	**13.01%**	**$1,592,580**	**$12,668,214**	**12.57%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$3,071,240	$3,705,295
2. Next year's Tier 1/Tier 2 UAL payment	222,296	168,298
3. Combined valuation payroll	21,979,926	21,695,391
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.01%	0.78%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.01%	12.57%
b. Tier 1/Tier 2 UAL rate	1.01%	0.78%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.15%	13.48%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	95%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	14.15%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.44%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.01%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.43%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.71%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.01%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.01%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.01%	12.57%
b. Tier 1/Tier 2 UAL rate	(1.43%)	(0.99%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.71%	11.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$889,691	$1,455,670	$2,345,361
Tier 2	8,062,620	1,764,028	9,826,648
Tier 1/Tier 2 valuation payroll	8,952,311	3,219,698	12,172,009
OPSRP valuation payroll	7,660,250	2,147,667	9,807,917
Combined valuation payroll	**$16,612,561**	**$5,367,365**	**$21,979,926**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	16	146	181	343	17	161	179	357
Police & Fire	17	25	36	78	17	27	34	78
Total	33	171	217	421	34	188	213	435
Active Members with previous service segments with the employer								
General Service	16	29	N/A	45	22	54	N/A	76
Police & Fire	9	13	N/A	22	15	23	N/A	38
Total	25	42	N/A	67	37	77	N/A	114
Dormant Members								
General Service	16	73	9	98	10	71	7	88
Police & Fire	10	7	3	20	14	7	2	23
Total	26	80	12	118	24	78	9	111
Retired Members and Beneficiaries								
General Service	20	84	1	105	17	75	0	92
Police & Fire	57	5	0	62	51	5	0	56
Total	77	89	1	167	68	80	0	148
Grand Total Number of Members	**161**	**382**	**230**	**773**	**163**	**423**	**222**	**808**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29		1								1
30-34		3	2							5
35-39		5	11	1						17
40-44		4	24	6	2					36
45-49		4	22	4	7					37
50-54	1	2	24	1	3	3				34
55-59		1	40	1						42
60-64			16	1	1	1	1			20
65-69		1	7							8
70-74		1	2							3
75+			1							1
Total	1	22	149	14	13	4	1	0	0	204

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	3	191
35-39	8	560
40-44	15	603
45-49	8	533
50-54	27	633
55-59	24	476
60-64	15	452
65-69	5	164
70-74	1	1,894
75+		
Total	106	532

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49	5	1,307
50-54	3	1,989
55-59	13	1,480
60-64	41	1,127
65-69	57	813
70-74	24	507
75-79	19	573
80-84	2	158
85-89	2	2,117
90-94		
95-99		
100+		
Total	166	915

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Winchester Bay Sanitary District/2714
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

Milliman

December 2013
Winchester Bay Sanitary District/2714

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Winchester Bay Sanitary District/2714

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Winchester Bay Sanitary District -- #2714

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Winchester Bay Sanitary District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Winchester Bay Sanitary District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Winchester Bay Sanitary District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.68%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	3.46%	3.46%	3.46%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.74%**	**11.42%**	**15.52%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.30%**	**11.90%**	**16.00%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 76%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.78%	13.78%
Minimum July 1, 2015 Rate	10.78%	7.78%
Maximum July 1, 2015 Rate	16.78%	19.78%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$200,678	$186,803	($13,875)	107%	$96,322	(14%)
12/31/2008	129,283	199,044	69,761	65%	99,241	70%
12/31/2009	151,074	216,670	65,596	70%	138,874	47%
12/31/2010	168,693	228,660	59,967	74%	139,258	43%
12/31/2011	170,661	234,713	64,052	73%	138,822	46%
12/31/2012	204,010	269,846	65,836	76%	143,212	46%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Winchester Bay Sanitary District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$65,836	$64,052
Allocated pooled OPSRP UAL	10,094	2,369
Side account	0	0
Net unfunded pension actuarial accrued liability	75,930	66,421
Combined valuation payroll	143,212	138,822
Net pension UAL as a percentage of payroll	53%	48%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,005	$3,596

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$12,171	$12,808
Tier 1/Tier 2 valuation payroll	104,186	101,866
Tier 1/Tier 2 pension normal cost rate	11.68%	12.57%
Tier 1/ Tier 2 Actuarial accrued liability	$269,846	$234,713
Actuarial asset value	204,010	170,661
Tier 1/Tier 2 Unfunded actuarial accrued liability	65,836	64,052
Tier 1/ Tier 2 Funded status	76%	73%
Combined valuation payroll	$143,212	$138,822
Tier 1/Tier 2 UAL as a percentage of payroll	46%	46%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	3.46%	3.71%
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	3	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	143,212	138,822
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$16,724	$14,573
2. Employer reserves	124,502	93,675
3. Benefits in force reserve	62,784	62,413
4. Total market value of assets *(1. + 2. + 3.)*	**$204,010**	**$170,661**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$170,661
2.	Regular employer contributions	15,299
3.	Benefit payments and expenses	(9,861)
4.	Adjustments[2]	2,185
5.	Interest credited	25,726
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$204,010**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	12,171	12,808
Total	**$12,171**	**$12,808**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$13,488	$12,171	($1,317)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	164,046	121,200
▪ **Total Active Members**	**$164,046**	**$121,200**
Dormant Members	0	0
Retired Members and Beneficiaries	105,800	113,513
Total Actuarial Accrued Liability	**$269,846**	**$234,713**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$251,291	$269,846	$18,555

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$269,846	$234,713
2. Actuarial value of assets	204,010	170,661
3. Unfunded accrued liability *(1. – 2.)*	65,836	64,052
4. Funded percentage *(2. ÷ 1.)*	76%	73%
5. Combined valuation payroll	$143,212	$138,822
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	46%	46%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$65,836	$4,765
Total				**$65,836**	**$4,765**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$234,713
b. Normal cost at December 31, 2011	12,808
c. Benefit payments during 2012	(9,784)
d. Interest at 8.0% to December 31, 2012	19,410
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	257,147
f. Change in actuarial accrued liability due to assumption, method, and plan changes	18,555
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	275,702
2. Actuarial accrued liability at December 31, 2012	269,846
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	5,856
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	170,661
b. Contributions for 2012[1]	15,299
c. Benefit payments and expenses during 2012	(9,861)
d. Interest at 8.0% to December 31, 2012	13,870
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	189,970
5. Actuarial value of assets at December 31, 2012	204,010
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	14,040
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$19,896**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$64,052**
2. Expected increase	3,125
3. Liability (gain)/loss	(5,856)
4. Asset (gain)/loss	(14,040)
5. Change due to changes in assumptions, methods, and plan provisions	18,555
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$65,836**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	12,171	104,186	11.68%	12,808	101,866	12.57%
Total	**$12,171**	**$104,186**	**11.68%**	**$12,808**	**$101,866**	**12.57%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$65,836	$64,052
2. Next year's Tier 1/Tier 2 UAL payment	4,765	4,975
3. Combined valuation payroll	143,212	138,822
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.33%	3.58%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.68%	12.57%
b. Tier 1/Tier 2 UAL rate	3.33%	3.58%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.14%	16.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.78%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.78%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.76%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	76%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.78%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.78%
7. July 1, 2015 total pension rate, before adjustment	15.14%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	3.33%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.33%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	15.14%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.68%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.68%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.14%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.68%	12.57%
b. Tier 1/Tier 2 UAL rate	3.33%	3.58%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	15.14%	16.28%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	104,186	0	104,186
Tier 1/Tier 2 valuation payroll	104,186	0	104,186
OPSRP valuation payroll	39,026	0	39,026
Combined valuation payroll	**$143,212**	**$0**	**$143,212**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	2	1	3	0	2	1	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	1	3	0	2	1	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	3	0	0	3	3	0	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	3	0	0	3	3	0	0	3
Grand Total Number of Members	**3**	**2**	**1**	**6**	**3**	**2**	**1**	**6**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54				1						**1**
55-59		1								**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	302
65-69		
70-74		
75-79		
80-84	2	472
85-89		
90-94		
95-99		
100+		
Total	3	415

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Weston Cemetery/2686
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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December 2013
Weston Cemetery/2686

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA	Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary	Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Weston Cemetery -- #2686

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Weston Cemetery to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Weston Cemetery.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Weston Cemetery

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	36.74%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(25.03%)	(25.03%)	(25.03%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.31%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.87%**	**0.48%**	**0.48%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 85%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$119,082	$99,674	($19,408)	119%	$20,760	(93%)
12/31/2008	85,842	99,205	13,363	87%	20,406	65%
12/31/2009	95,306	108,235	12,929	88%	18,996	68%
12/31/2010	99,997	118,986	18,989	84%	23,703	80%
12/31/2011	94,356	120,406	26,050	78%	3,845	678%
12/31/2012	103,907	122,524	18,617	85%	9,681	192%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Weston Cemetery

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$18,617	$26,050
Allocated pooled OPSRP UAL	682	66
Side account	0	0
Net unfunded pension actuarial accrued liability	19,299	26,116
Combined valuation payroll	9,681	3,845
Net pension UAL as a percentage of payroll	199%	679%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$203	$100

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$3,557	$511
Tier 1/Tier 2 valuation payroll	9,681	3,845
Tier 1/Tier 2 pension normal cost rate	36.74%	13.29%
Tier 1/ Tier 2 Actuarial accrued liability	$122,524	$120,406
Actuarial asset value	103,907	94,356
Tier 1/Tier 2 Unfunded actuarial accrued liability	18,617	26,050
Tier 1/ Tier 2 Funded status	85%	78%
Combined valuation payroll	$9,681	$3,845
Tier 1/Tier 2 UAL as a percentage of payroll	192%	678%
Tier 1/Tier 2 UAL rate	(25.03%)	(0.98%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	0
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	9,681	3,845
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,826	$2,463
2. Employer reserves	45,544	37,681
3. Benefits in force reserve	55,536	54,212
4. Total market value of assets *(1. + 2. + 3.)*	**$103,907**	**$94,356**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$94,356
2. Regular employer contributions	2,165
3. Benefit payments and expenses	(8,722)
4. Adjustments[2]	2,999
5. Interest credited	13,108
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$103,907**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	3,557	511
Total	**$3,557**	**$511**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$3,598	$3,557	($41)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	11,163	4,863
▪ **Total Active Members**	**$11,163**	**$4,863**
Dormant Members	17,774	16,946
Retired Members and Beneficiaries	93,587	98,597
Total Actuarial Accrued Liability	**$122,524**	**$120,406**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$123,973	$122,524	($1,449)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$122,524	$120,406
2. Actuarial value of assets	103,907	94,356
3. Unfunded accrued liability *(1. – 2.)*	18,617	26,050
4. Funded percentage *(2. ÷ 1.)*	85%	78%
5. Combined valuation payroll	$9,681	$3,845
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	192%	678%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$18,617	$1,347
Total				**$18,617**	**$1,347**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$120,406
b. Normal cost at December 31, 2011	511
c. Benefit payments during 2012	(8,654)
d. Interest at 8.0% to December 31, 2012	9,327
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	121,590
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,449)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	120,141
2. Actuarial accrued liability at December 31, 2012	122,524
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(2,383)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	94,356
b. Contributions for 2012[1]	2,165
c. Benefit payments and expenses during 2012	(8,722)
d. Interest at 8.0% to December 31, 2012	7,286
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	95,085
5. Actuarial value of assets at December 31, 2012	103,907
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	8,821
7. Total actuarial gain/(loss) *(3. + 6.)*	**$6,438**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$26,050**
2. Expected increase	454
3. Liability (gain)/loss	2,383
4. Asset (gain)/loss	(8,821)
5. Change due to changes in assumptions, methods, and plan provisions	(1,449)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$18,617**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	3,557	9,681	36.74%	511	3,845	13.29%
Total	**$3,557**	**$9,681**	**36.74%**	**$511**	**$3,845**	**13.29%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$18,617	$26,050
2. Next year's Tier 1/Tier 2 UAL payment	1,347	1,861
3. Combined valuation payroll	9,681	3,845
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	13.91%	48.40%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	36.74%	13.29%
b. Tier 1/Tier 2 UAL rate	13.91%	48.40%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	50.78%	61.82%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	85%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	50.78%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(39.07%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	13.91%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(25.16%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.71%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	36.74%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	36.74%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	36.74%	13.29%
b. Tier 1/Tier 2 UAL rate	(25.16%)	(1.11%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.71%	12.31%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	9,681	0	9,681
Tier 1/Tier 2 valuation payroll	9,681	0	9,681
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$9,681**	**$0**	**$9,681**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	0	2	N/A	2
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	0	2	N/A	2
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**2**	**3**	**0**	**5**	**2**	**3**	**0**	**5**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1							**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	206
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	206

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	146
65-69		
70-74		
75-79		
80-84	1	760
85-89		
90-94		
95-99		
100+		
Total	2	453

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

West Valley Fire District/2725
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
West Valley Fire District/2725

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

West Valley Fire District -- #2725

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for West Valley Fire District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to West Valley Fire District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for West Valley Fire District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.38%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.69%	0.69%	0.69%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.67%**	**8.65%**	**12.75%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.23%**	**9.13%**	**13.23%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 96%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	12.12%	12.12%
Minimum July 1, 2015 Rate	9.12%	6.12%
Maximum July 1, 2015 Rate	15.12%	18.12%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$489,272	$443,280	($45,992)	110%	$254,532	(18%)
12/31/2008	374,665	523,601	148,936	72%	282,551	53%
12/31/2009	467,780	426,605	(41,175)	110%	287,520	(14%)
12/31/2010	556,619	497,630	(58,989)	112%	490,715	(12%)
12/31/2011	596,571	590,253	(6,318)	101%	457,183	(1%)
12/31/2012	699,866	728,108	28,242	96%	368,253	8%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

West Valley Fire District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$28,242	($6,318)
Allocated pooled OPSRP UAL	25,955	7,801
Side account	0	0
Net unfunded pension actuarial accrued liability	54,197	1,483
Combined valuation payroll	368,253	457,183
Net pension UAL as a percentage of payroll	15%	0%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$7,726	$11,844

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$12,276	$28,049
Tier 1/Tier 2 valuation payroll	85,353	189,959
Tier 1/Tier 2 pension normal cost rate	14.38%	14.77%
Tier 1/ Tier 2 Actuarial accrued liability	$728,108	$590,253
Actuarial asset value	699,866	596,571
Tier 1/Tier 2 Unfunded actuarial accrued liability	28,242	(6,318)
Tier 1/ Tier 2 Funded status	96%	101%
Combined valuation payroll	$368,253	$457,183
Tier 1/Tier 2 UAL as a percentage of payroll	8%	(1%)
Tier 1/Tier 2 UAL rate	0.69%	(0.15%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	3
Tier 1/Tier 2 dormant members	5	3
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	368,253	457,183
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$76,329	$66,517
2. Employer reserves	609,918	516,937
3. Benefits in force reserve	13,619	13,117
4. Total market value of assets *(1. + 2. + 3.)*	**$699,866**	**$596,571**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$596,571
2.	Regular employer contributions	16,756
3.	Benefit payments and expenses	(2,139)
4.	Adjustments [2]	1,879
5.	Interest credited	86,798
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$699,866**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$12,276	$11,128
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	16,921
Tier 2 General Service	0	0
Total	**$12,276**	**$28,049**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$16,648	$12,276	($4,372)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$203,162	$160,076
▪ Tier 1 General Service	32,270	34,044
▪ Tier 2 Police & Fire	227,413	366,576
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$462,845**	**$560,696**
Dormant Members	242,313	5,700
Retired Members and Beneficiaries	22,950	23,857
Total Actuarial Accrued Liability	**$728,108**	**$590,253**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$709,206	$728,108	$18,902

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$728,108	$590,253
2. Actuarial value of assets	699,866	596,571
3. Unfunded accrued liability *(1. – 2.)*	28,242	(6,318)
4. Funded percentage *(2. ÷ 1.)*	96%	101%
5. Combined valuation payroll	$368,253	$457,183
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	8%	(1%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$28,242	$2,044
Total				**$28,242**	**$2,044**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$590,253
b. Normal cost at December 31, 2011	28,049
c. Benefit payments during 2012	(2,122)
d. Interest at 8.0% to December 31, 2012	49,379
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	665,559
f. Change in actuarial accrued liability due to assumption, method, and plan changes	18,902
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	684,461
2. Actuarial accrued liability at December 31, 2012	728,108
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(43,647)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	596,571
b. Contributions for 2012[1]	16,756
c. Benefit payments and expenses during 2012	(2,139)
d. Interest at 8.0% to December 31, 2012	48,310
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	659,499
5. Actuarial value of assets at December 31, 2012	699,866
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	40,367
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($3,280)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($6,318)**
2. Expected increase	12,378
3. Liability (gain)/loss	43,647
4. Asset (gain)/loss	(40,367)
5. Change due to changes in assumptions, methods, and plan provisions	18,902
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$28,242**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$12,276	$85,353	14.38%	$11,128	$98,602	11.29%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	16,921	91,357	18.52%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$12,276**	**$85,353**	**14.38%**	**$28,049**	**$189,959**	**14.77%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$28,242	($6,318)
2. Next year's Tier 1/Tier 2 UAL payment	2,044	(1,302)
3. Combined valuation payroll	368,253	457,183
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.56%	(0.28%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.38%	14.77%
b. Tier 1/Tier 2 UAL rate	0.56%	(0.28%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.07%	14.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.12%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.12%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.42%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.12%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	15.12%
7. July 1, 2015 total pension rate, before adjustment	15.07%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.56%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.56%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	15.07%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.38%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.38%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.07%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.38%	14.77%
b. Tier 1/Tier 2 UAL rate	0.56%	(0.28%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	15.07%	14.62%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$85,353	$85,353
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	85,353	85,353
OPSRP valuation payroll	503	282,397	282,900
Combined valuation payroll	**$503**	**$367,750**	**$368,253**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	6	7	2	1	7	10
Total	1	0	6	7	2	1	7	10
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	0	N/A	1
Police & Fire	2	1	N/A	3	2	11	N/A	13
Total	3	1	N/A	4	3	11	N/A	14
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	4	1	1	6	3	0	0	3
Total	4	1	1	6	3	0	0	3
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	5	0	0	5	5	0	0	5
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**13**	**2**	**7**	**22**	**13**	**12**	**7**	**32**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49						1				1
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	1	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	2	13
45-49		
50-54	1	0
55-59	1	1,473
60-64		
65-69		
70-74	1	394
75+		
Total	5	379

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	2	17
45-49		
50-54		
55-59	1	58
60-64		
65-69	1	21
70-74		
75-79	1	52
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	33

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

West Side Rural Fire Protection District/2796
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

December 2013
West Side Rural Fire Protection District/2796

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
West Side Rural Fire Protection District/2796

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

West Side Rural Fire Protection District -- #2796

December 2013

CONTENTS

Executive Summary

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

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to West Side Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for West Side Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	21.23%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(4.69%)	(4.69%)	(4.69%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.14%**	**3.27%**	**7.37%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.70%**	**3.75%**	**7.85%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 123%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.54%	13.54%
Minimum July 1, 2015 Rate	10.54%	7.54%
Maximum July 1, 2015 Rate	16.54%	19.54%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$180,762	$105,160	($75,602)	172%	$68,307	(111%)
12/31/2008	139,545	124,659	(14,886)	112%	72,702	(20%)
12/31/2009	180,273	148,854	(31,419)	121%	76,630	(41%)
12/31/2010	214,440	171,459	(42,981)	125%	79,841	(54%)
12/31/2011	231,035	197,980	(33,055)	117%	82,111	(40%)
12/31/2012	278,239	226,802	(51,437)	123%	84,601	(61%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

West Side Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($51,437)	($33,055)
Allocated pooled OPSRP UAL	5,963	1,401
Side account	0	0
Net unfunded pension actuarial accrued liability	(45,474)	(31,654)
Combined valuation payroll	84,601	82,111
Net pension UAL as a percentage of payroll	(54%)	(39%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,775	$2,127

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$17,958	$16,252
Tier 1/Tier 2 valuation payroll	84,601	82,111
Tier 1/Tier 2 pension normal cost rate	21.23%	19.79%
Tier 1/ Tier 2 Actuarial accrued liability	$226,802	$197,980
Actuarial asset value	278,239	231,035
Tier 1/Tier 2 Unfunded actuarial accrued liability	(51,437)	(33,055)
Tier 1/ Tier 2 Funded status	123%	117%
Combined valuation payroll	$84,601	$82,111
Tier 1/Tier 2 UAL as a percentage of payroll	(61%)	(40%)
Tier 1/Tier 2 UAL rate	(4.69%)	(3.75%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	84,601	82,111
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$23,365	$20,359
2. Employer reserves	254,874	210,676
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$278,239**	**$231,035**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$231,035
2. Regular employer contributions	12,254
3. Benefit payments and expenses	0
4. Adjustments[2]	(25)
5. Interest credited	34,975
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$278,239**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	17,958	16,252
Tier 2 General Service	0	0
Total	**$17,958**	**$16,252**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$13,513	$17,958	$4,445

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	226,802	197,980
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$226,802**	**$197,980**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$226,802**	**$197,980**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$231,434	$226,802	($4,632)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$226,802	$197,980
2. Actuarial value of assets	278,239	231,035
3. Unfunded accrued liability *(1. – 2.)*	(51,437)	(33,055)
4. Funded percentage *(2. ÷ 1.)*	123%	117%
5. Combined valuation payroll	$84,601	$82,111
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(61%)	(40%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($51,437)	($3,723)
Total				**($51,437)**	**($3,723)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$197,980
b. Normal cost at December 31, 2011	16,252
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	17,139
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	231,371
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(4,632)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	226,739
2. Actuarial accrued liability at December 31, 2012	226,802
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(63)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	231,035
b. Contributions for 2012[1]	12,254
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	18,973
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	262,262
5. Actuarial value of assets at December 31, 2012	278,239
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	15,977
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$15,914**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($33,055)**
2. Expected increase	2,164
3. Liability (gain)/loss	63
4. Asset (gain)/loss	(15,977)
5. Change due to changes in assumptions, methods, and plan provisions	(4,632)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($51,437)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	17,958	84,601	21.23%	16,252	82,111	19.79%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$17,958**	**$84,601**	**21.23%**	**$16,252**	**$82,111**	**19.79%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($51,437)	($33,055)
2. Next year's Tier 1/Tier 2 UAL payment	(3,723)	(3,190)
3. Combined valuation payroll	84,601	82,111
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(4.40%)	(3.88%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	21.23%	19.79%
b. Tier 1/Tier 2 UAL rate	(4.40%)	(3.88%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.96%	16.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.54%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.54%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.71%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	123%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.54%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.54%
7. July 1, 2015 total pension rate, before adjustment	16.96%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.42%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(4.40%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(4.82%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.54%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	21.23%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	21.23%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.54%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	21.23%	19.79%
b. Tier 1/Tier 2 UAL rate	(4.82%)	(3.88%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.54%	16.04%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	84,601	84,601
Tier 1/Tier 2 valuation payroll	0	84,601	84,601
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$84,601**	**$84,601**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	0	1	0	1
Total	0	1	0	1	0	1	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64			1							**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Wallowa County/2050
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Wallowa County/2050

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Wallowa County -- #2050

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Wallowa County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Wallowa County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Wallowa County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.67%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(8.46%)	(8.46%)	(8.46%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**7.81%**	**0.00%**	**3.60%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**8.37%**	**0.48%**	**4.08%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 119%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.48%	8.48%
Minimum July 1, 2015 Rate	5.48%	2.48%
Maximum July 1, 2015 Rate	11.48%	14.48%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,284,259	$949,805	($334,454)	135%	$295,218	(113%)
12/31/2008	956,442	1,052,688	96,246	91%	301,113	32%
12/31/2009	1,085,009	1,054,205	(30,804)	103%	280,934	(11%)
12/31/2010	1,148,797	1,222,151	73,354	94%	299,382	25%
12/31/2011	1,158,734	1,294,432	135,698	90%	283,239	48%
12/31/2012	1,302,300	1,090,558	(211,742)	119%	178,369	(119%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Wallowa County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($211,742)	$135,698
Allocated pooled OPSRP UAL	12,572	4,833
Side account	0	0
Net unfunded pension actuarial accrued liability	(199,170)	140,531
Combined valuation payroll	178,369	283,239
Net pension UAL as a percentage of payroll	(112%)	50%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,742	$7,337

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$12,359	$20,401
Tier 1/Tier 2 valuation payroll	78,892	193,346
Tier 1/Tier 2 pension normal cost rate	15.67%	10.55%
Tier 1/ Tier 2 Actuarial accrued liability	$1,090,558	$1,294,432
Actuarial asset value	1,302,300	1,158,734
Tier 1/Tier 2 Unfunded actuarial accrued liability	(211,742)	135,698
Tier 1/ Tier 2 Funded status	119%	90%
Combined valuation payroll	$178,369	$283,239
Tier 1/Tier 2 UAL as a percentage of payroll	(119%)	48%
Tier 1/Tier 2 UAL rate	(8.46%)	0.93%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	3
Tier 1/Tier 2 dormant members	4	2
Tier 1/Tier 2 retirees and beneficiaries	8	8

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	178,369	283,239
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$140,231	$123,244
2. Employer reserves	822,701	711,266
3. Benefits in force reserve	339,367	324,223
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,302,300**	**$1,158,734**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$1,158,734
2.	Regular employer contributions	12,259
3.	Benefit payments and expenses	(53,300)
4.	Adjustments[2]	26,432
5.	Interest credited	158,175
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,302,300**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$75
Tier 1 General Service	0	0
Tier 2 Police & Fire	12,359	20,326
Tier 2 General Service	0	0
Total	**$12,359**	**$20,401**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$11,964	$12,359	$395

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$998	$286,835
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	176,142	250,121
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$177,140**	**$536,956**
Dormant Members	341,538	167,799
Retired Members and Beneficiaries	571,880	589,677
Total Actuarial Accrued Liability	**$1,090,558**	**$1,294,432**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,118,176	$1,090,558	($27,618)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,090,558	$1,294,432
2. Actuarial value of assets	1,302,300	1,158,734
3. Unfunded accrued liability *(1. – 2.)*	(211,742)	135,698
4. Funded percentage *(2. ÷ 1.)*	119%	90%
5. Combined valuation payroll	$178,369	$283,239
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(119%)	48%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($211,742)	($15,326)
Total				**($211,742)**	**($15,326)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,294,432
b. Normal cost at December 31, 2011	20,401
c. Benefit payments during 2012	(52,883)
d. Interest at 8.0% to December 31, 2012	103,071
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,365,021
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(27,618)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,337,403
2. Actuarial accrued liability at December 31, 2012	1,090,558
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	246,845
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,158,734
b. Contributions for 2012[1]	12,259
c. Benefit payments and expenses during 2012	(53,300)
d. Interest at 8.0% to December 31, 2012	91,057
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,208,750
5. Actuarial value of assets at December 31, 2012	1,302,300
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	93,550
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$340,395**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$135,698**
2. Expected increase	20,573
3. Liability (gain)/loss	(246,845)
4. Asset (gain)/loss	(93,550)
5. Change due to changes in assumptions, methods, and plan provisions	(27,618)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($211,742)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$75	$57,724	0.13%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	12,359	78,892	15.67%	20,326	135,622	14.99%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$12,359**	**$78,892**	**15.67%**	**$20,401**	**$193,346**	**10.55%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($211,742)	$135,698
2. Next year's Tier 1/Tier 2 UAL payment	(15,326)	7,141
3. Combined valuation payroll	178,369	283,239
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(8.59%)	2.52%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.67%	10.55%
b. Tier 1/Tier 2 UAL rate	(8.59%)	2.52%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	7.21%	13.20%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.48%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.48%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.70%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	119%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.48%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.48%
7. July 1, 2015 total pension rate, before adjustment	7.21%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(8.59%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(8.59%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	7.21%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.67%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.67%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	7.21%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.67%	10.55%
b. Tier 1/Tier 2 UAL rate	(8.59%)	0.80%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	7.21%	11.48%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	78,892	78,892
Tier 1/Tier 2 valuation payroll	0	78,892	78,892
OPSRP valuation payroll	0	99,477	99,477
Combined valuation payroll	**$0**	**$178,369**	**$178,369**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	2	3	1	2	2	5
Total	0	1	2	3	1	2	2	5
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	0	N/A	1	0	1	N/A	1
Total	1	0	N/A	1	0	1	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	3	1	0	4	2	0	0	2
Total	3	1	0	4	2	0	0	2
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	7	1	0	8	7	1	0	8
Total	7	1	0	8	7	1	0	8
Grand Total Number of Members	**11**	**3**	**2**	**16**	**10**	**4**	**2**	**16**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49			1							1
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	1	0	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	1,577
45-49	2	1,113
50-54	1	543
55-59		
60-64		
65-69		
70-74		
75+		
Total	4	1,087

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	1,019
60-64	1	612
65-69	1	844
70-74	2	524
75-79	2	178
80-84	1	105
85-89		
90-94		
95-99		
100+		
Total	8	498

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Vernonia Fire/2797
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

Milliman

December 2013
Vernonia Fire/2797

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Vernonia Fire/2797

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Vernonia Fire -- #2797

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Vernonia Fire to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Vernonia Fire.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Vernonia Fire

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	9.18%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.03%)	(3.03%)	(3.03%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.75%**	**4.93%**	**9.03%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**7.31%**	**5.41%**	**9.51%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 116%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$238,088	$127,240	($110,848)	187%	$69,476	(160%)
12/31/2008	181,217	160,109	(21,108)	113%	13,898	(152%)
12/31/2009	216,962	163,620	(53,342)	133%	68,210	(78%)
12/31/2010	237,730	179,180	(58,550)	133%	63,952	(92%)
12/31/2011	202,377	193,402	(8,975)	105%	95,536	(9%)
12/31/2012	222,028	192,073	(29,955)	116%	68,647	(44%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Vernonia Fire

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($29,955)	($8,975)
Allocated pooled OPSRP UAL	4,838	1,630
Side account	0	0
Net unfunded pension actuarial accrued liability	(25,117)	(7,345)
Combined valuation payroll	68,647	95,536
Net pension UAL as a percentage of payroll	(37%)	(8%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,440	$2,475

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$1,605	$1,357
Tier 1/Tier 2 valuation payroll	17,475	45,493
Tier 1/Tier 2 pension normal cost rate	9.18%	5.98%
Tier 1/ Tier 2 Actuarial accrued liability	$192,073	$193,402
Actuarial asset value	222,028	202,377
Tier 1/Tier 2 Unfunded actuarial accrued liability	(29,955)	(8,975)
Tier 1/ Tier 2 Funded status	116%	105%
Combined valuation payroll	$68,647	$95,536
Tier 1/Tier 2 UAL as a percentage of payroll	(44%)	(9%)
Tier 1/Tier 2 UAL rate	(3.03%)	(0.57%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	2
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	68,647	95,536
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$14,394	$12,646
2. Employer reserves	123,790	109,049
3. Benefits in force reserve	83,844	80,682
4. Total market value of assets ***(1. + 2. + 3.)***	**$222,028**	**$202,377**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$202,377
2. Regular employer contributions	(740)
3. Benefit payments and expenses	(13,168)
4. Adjustments [2]	6,276
5. Interest credited	27,284
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$222,028**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$38
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	1,605	1,319
Total	**$1,605**	**$1,357**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$1,430	$1,605	$175

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$4,438
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	20,009	11,791
▪ **Total Active Members**	**$20,009**	**$16,229**
Dormant Members	30,775	30,435
Retired Members and Beneficiaries	141,289	146,738
Total Actuarial Accrued Liability	**$192,073**	**$193,402**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$194,500	$192,073	($2,427)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$192,073	$193,402
2. Actuarial value of assets	222,028	202,377
3. Unfunded accrued liability *(1. – 2.)*	(29,955)	(8,975)
4. Funded percentage *(2. ÷ 1.)*	116%	105%
5. Combined valuation payroll	$68,647	$95,536
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(44%)	(9%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($29,955)	($2,168)
Total				**($29,955)**	**($2,168)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$193,402
b. Normal cost at December 31, 2011	1,357
c. Benefit payments during 2012	(13,065)
d. Interest at 8.0% to December 31, 2012	15,058
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	196,752
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(2,427)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	194,325
2. Actuarial accrued liability at December 31, 2012	192,073
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	2,252
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	202,377
b. Contributions for 2012[1]	(740)
c. Benefit payments and expenses during 2012	(13,168)
d. Interest at 8.0% to December 31, 2012	15,634
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	204,102
5. Actuarial value of assets at December 31, 2012	222,028
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	17,926
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$20,178**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($8,975)**
2. Expected increase	1,625
3. Liability (gain)/loss	(2,252)
4. Asset (gain)/loss	(17,926)
5. Change due to changes in assumptions, methods, and plan provisions	(2,427)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($29,955)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$38	$28,566	0.13%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	1,605	17,475	9.18%	1,319	16,927	7.79%
Total	**$1,605**	**$17,475**	**9.18%**	**$1,357**	**$45,493**	**2.98%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($29,955)	($8,975)
2. Next year's Tier 1/Tier 2 UAL payment	(2,168)	(1,703)
3. Combined valuation payroll	68,647	95,536
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.16%)	(1.78%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.18%	2.98%
b. Tier 1/Tier 2 UAL rate	(3.16%)	(1.78%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	6.15%	1.33%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	116%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	6.15%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(3.16%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.16%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	6.15%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	9.18%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	9.18%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	6.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.18%	5.98%
b. Tier 1/Tier 2 UAL rate	(3.16%)	(0.70%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	6.15%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	17,475	0	17,475
Tier 1/Tier 2 valuation payroll	17,475	0	17,475
OPSRP valuation payroll	0	51,172	51,172
Combined valuation payroll	**$17,475**	**$51,172**	**$68,647**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	1	1	1	0	1	2
Total	0	1	1	2	1	1	1	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	0	1	0	1
Total	0	1	0	1	0	1	0	1
Grand Total Number of Members	**1**	**2**	**1**	**4**	**2**	**2**	**1**	**5**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44		1								1
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	1	0	0	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	213
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	213

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	923
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	923

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Valley View Cemetery/2536
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Valley View Cemetery/2536

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Valley View Cemetery -- #2536

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Valley View Cemetery to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Valley View Cemetery.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Valley View Cemetery

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	20.64%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(15.20%)	(15.20%)	(15.20%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**0.48%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 1279%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$116,095	$28,157	($87,938)	412%	$11,898	(739%)
12/31/2008	77,029	26,660	(50,369)	289%	8,667	(581%)
12/31/2009	77,911	8,018	(69,893)	972%	16,000	(437%)
12/31/2010	87,303	8,851	(78,452)	986%	18,935	(414%)
12/31/2011	88,943	9,444	(79,499)	942%	39,559	(201%)
12/31/2012	101,364	7,927	(93,437)	1279%	33,825	(276%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Valley View Cemetery

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($93,437)	($79,499)
Allocated pooled OPSRP UAL	2,384	675
Side account	0	0
Net unfunded pension actuarial accrued liability	(91,053)	(78,824)
Combined valuation payroll	33,825	39,559
Net pension UAL as a percentage of payroll	(269%)	(199%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$710	$1,025

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$664	$2
Tier 1/Tier 2 valuation payroll	4,368	4,368
Tier 1/Tier 2 pension normal cost rate	20.64%	5.46%
Tier 1/ Tier 2 Actuarial accrued liability	$7,927	$9,444
Actuarial asset value	101,364	88,943
Tier 1/Tier 2 Unfunded actuarial accrued liability	(93,437)	(79,499)
Tier 1/ Tier 2 Funded status	1279%	942%
Combined valuation payroll	$33,825	$39,559
Tier 1/Tier 2 UAL as a percentage of payroll	(276%)	(201%)
Tier 1/Tier 2 UAL rate	(15.20%)	(0.05%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	1
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	33,825	39,559
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	97,227	84,881
3. Benefits in force reserve	4,137	4,062
4. Total market value of assets ***(1. + 2. + 3.)***	**$101,364**	**$88,943**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$88,943
2.	Regular employer contributions	174
3.	Benefit payments and expenses	(650)
4.	Adjustments[2]	155
5.	Interest credited	12,742
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$101,364**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	664	2
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$664**	**$2**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$2	$664	$662

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	956	2,056
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$956**	**$2,056**
Dormant Members	0	0
Retired Members and Beneficiaries	6,971	7,388
Total Actuarial Accrued Liability	**$7,927**	**$9,444**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$8,470	$7,927	($543)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$7,927	$9,444
2. Actuarial value of assets	101,364	88,943
3. Unfunded accrued liability *(1. – 2.)*	(93,437)	(79,499)
4. Funded percentage *(2. ÷ 1.)*	1279%	942%
5. Combined valuation payroll	$33,825	$39,559
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(276%)	(201%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($93,437)	($6,763)
Total				**($93,437)**	**($6,763)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$9,444
b. Normal cost at December 31, 2011	2
c. Benefit payments during 2012	(645)
d. Interest at 8.0% to December 31, 2012	730
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	9,531
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(543)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	8,988
2. Actuarial accrued liability at December 31, 2012	7,927
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	1,061
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	88,943
b. Contributions for 2012[1]	174
c. Benefit payments and expenses during 2012	(650)
d. Interest at 8.0% to December 31, 2012	7,096
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	95,564
5. Actuarial value of assets at December 31, 2012	101,364
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	5,801
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$6,862**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($79,499)**
2. Expected increase	(6,533)
3. Liability (gain)/loss	(1,061)
4. Asset (gain)/loss	(5,801)
5. Change due to changes in assumptions, methods, and plan provisions	(543)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($93,437)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	664	4,368	15.20%	2	4,368	0.05%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$664**	**$4,368**	**15.20%**	**$2**	**$4,368**	**0.05%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($93,437)	($79,499)
2. Next year's Tier 1/Tier 2 UAL payment	(6,763)	(6,869)
3. Combined valuation payroll	33,825	39,559
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(19.99%)	(17.36%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.20%	0.05%
b. Tier 1/Tier 2 UAL rate	(19.99%)	(17.36%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	(4.66%)	(17.18%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	1279%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	(4.66%)
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	4.66%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(19.99%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(15.33%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	0.00%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	5.44%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.20%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	20.64%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.64%	5.46%
b. Tier 1/Tier 2 UAL rate	(15.33%)	(0.18%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$4,368	$0	$4,368
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	4,368	0	4,368
OPSRP valuation payroll	29,457	0	29,457
Combined valuation payroll	**$33,825**	**$0**	**$33,825**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	2	2	0	0	3	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	2	2	0	0	3	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	1	0	N/A	1
Dormant Members								
General Service	0	0	0	0	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**1**	**0**	**2**	**3**	**3**	**0**	**3**	**6**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84	1	51
85-89		
90-94		
95-99		
100+		
Total	1	51

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Umatilla-Morrow Radio and Data District/2874
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Umatilla-Morrow Radio and Data District/2874

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Umatilla-Morrow Radio and Data District -- #2874

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Umatilla-Morrow Radio and Data District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Umatilla-Morrow Radio and Data District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Umatilla-Morrow Radio and Data District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	8.28%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.30%)	(0.30%)	(0.30%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**8.58%**	**7.66%**	**11.76%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.14%**	**8.14%**	**12.24%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 170%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$0	0%
12/31/2008	0	0	0	0%	0	0%
12/31/2009	0	0	0	0%	0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	493	493	0%	64,245	1%
12/31/2012	18,250	10,753	(7,497)	170%	125,894	(6%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Umatilla-Morrow Radio and Data District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($7,497)	$493
Allocated pooled OPSRP UAL	8,873	1,096
Side account	0	0
Net unfunded pension actuarial accrued liability	1,376	1,589
Combined valuation payroll	125,894	64,245
Net pension UAL as a percentage of payroll	1%	2%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,641	$1,664

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$10,427	$4,554
Tier 1/Tier 2 valuation payroll	125,894	64,245
Tier 1/Tier 2 pension normal cost rate	8.28%	7.09%
Tier 1/ Tier 2 Actuarial accrued liability	$10,753	$493
Actuarial asset value	18,250	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	(7,497)	493
Tier 1/ Tier 2 Funded status	170%	0%
Combined valuation payroll	$125,894	$64,245
Tier 1/Tier 2 UAL as a percentage of payroll	(6%)	1%
Tier 1/Tier 2 UAL rate	(0.30%)	0.19%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	125,894	64,245
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	18,250	0
3. Benefits in force reserve	0	0
4. Total market value of assets *(1. + 2. + 3.)*	**$18,250**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$0
2. Regular employer contributions	16,093
3. Benefit payments and expenses	0
4. Adjustments[2]	(157)
5. Interest credited	2,314
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$18,250**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	10,427	4,554
Total	**$10,427**	**$4,554**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$8,862	$10,427	$1,565

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	10,753	493
▪ **Total Active Members**	**$10,753**	**$493**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$10,753**	**$493**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$6,058	$10,753	$4,695

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$10,753	$493
2. Actuarial value of assets	18,250	0
3. Unfunded accrued liability *(1. – 2.)*	(7,497)	493
4. Funded percentage *(2. ÷ 1.)*	170%	0%
5. Combined valuation payroll	$125,894	$64,245
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(6%)	1%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($7,497)	($543)
Total				**($7,497)**	**($543)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$493
b. Normal cost at December 31, 2011	4,554
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	404
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	5,451
f. Change in actuarial accrued liability due to assumption, method, and plan changes	4,695
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	10,146
2. Actuarial accrued liability at December 31, 2012	10,753
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(607)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	0
b. Contributions for 2012[1]	16,093
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	644
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	16,737
5. Actuarial value of assets at December 31, 2012	18,250
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,513
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$906**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$493**
2. Expected increase	(11,779)
3. Liability (gain)/loss	607
4. Asset (gain)/loss	(1,513)
5. Change due to changes in assumptions, methods, and plan provisions	4,695
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($7,497)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	10,427	125,894	8.28%	4,554	64,245	7.09%
Total	**$10,427**	**$125,894**	**8.28%**	**$4,554**	**$64,245**	**7.09%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($7,497)	$493
2. Next year's Tier 1/Tier 2 UAL payment	(543)	36
3. Combined valuation payroll	125,894	64,245
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.43%)	0.06%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	8.28%	7.09%
b. Tier 1/Tier 2 UAL rate	(0.43%)	0.06%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	7.98%	7.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	170%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	7.98%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(0.43%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.43%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	7.98%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	8.28%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	8.28%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	7.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	8.28%	7.09%
b. Tier 1/Tier 2 UAL rate	(0.43%)	0.06%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	7.98%	7.28%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	125,894	0	125,894
Tier 1/Tier 2 valuation payroll	125,894	0	125,894
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$125,894**	**$0**	**$125,894**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	2	0	2	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**2**	**0**	**2**	**0**	**1**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							1
35-39			1							1
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	2	0	0	0	0	0	0	2

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Turner Fire District/2610
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

Milliman

December 2013
Turner Fire District/2610

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Turner Fire District/2610

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Turner Fire District -- #2610

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Turner Fire District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Turner Fire District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Turner Fire District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.67%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.86%)	(3.86%)	(3.86%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.41%**	**4.10%**	**8.20%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**13.97%**	**4.58%**	**8.68%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 117%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	12.81%	12.81%
Minimum July 1, 2015 Rate	9.81%	6.81%
Maximum July 1, 2015 Rate	15.81%	18.81%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$0	0%
12/31/2008	0	0	0	0%	0	0%
12/31/2009	0	0	0	0%	0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	1,274,813	1,088,856	(185,957)	117%	336,946	(55%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.56%	0.48%	0.48%

Executive Summary

Principal Valuation Results

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

Turner Fire District

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($185,957)	$0
Allocated pooled OPSRP UAL	23,749	0
Side account	0	0
Net unfunded pension actuarial accrued liability	(162,208)	0
Combined valuation payroll	336,946	0
Net pension UAL as a percentage of payroll	(48%)	0%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$7,069	$0

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$17,161	$0
Tier 1/Tier 2 valuation payroll	102,915	0
Tier 1/Tier 2 pension normal cost rate	16.67%	0.00%
Tier 1/ Tier 2 Actuarial accrued liability	$1,088,856	$0
Actuarial asset value	1,274,813	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	(185,957)	0
Tier 1/ Tier 2 Funded status	117%	0%
Combined valuation payroll	$336,946	$0
Tier 1/Tier 2 UAL as a percentage of payroll	(55%)	0%
Tier 1/Tier 2 UAL rate	(3.86%)	0.00%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	0
Tier 1/Tier 2 dormant members	7	0
Tier 1/Tier 2 retirees and beneficiaries	3	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	336,946	0
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$123,792	$0
2. Employer reserves	853,425	0
3. Benefits in force reserve	297,596	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,274,813**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$0
2.	Regular employer contributions	44,901
3.	Benefit payments and expenses	(46,740)
4.	Adjustments[2]	1,118,589
5.	Interest credited	158,063
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,274,813**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	**December 31, 2011**
Tier 1 Police & Fire	$17,161	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$17,161**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$22,594	$17,161	($5,433)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$418,836	$0
▪ Tier 1 General Service	740	0
▪ Tier 2 Police & Fire	96,564	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$516,140**	**$0**
Dormant Members	71,225	0
Retired Members and Beneficiaries	501,491	0
Total Actuarial Accrued Liability	**$1,088,856**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,096,909	$1,088,856	($8,053)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,088,856	$0
2. Actuarial value of assets	1,274,813	0
3. Unfunded accrued liability *(1. – 2.)*	(185,957)	0
4. Funded percentage *(2. ÷ 1.)*	117%	0%
5. Combined valuation payroll	$336,946	$0
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(55%)	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($185,957)	($13,460)
Total				**($185,957)**	**($13,460)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$0
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(8,053)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	(8,053)
2. Actuarial accrued liability at December 31, 2012	1,088,856
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,096,909)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	0
b. Contributions for 2012[1]	44,901
c. Benefit payments and expenses during 2012	(46,740)
d. Interest at 8.0% to December 31, 2012	(74)
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	(1,912)
5. Actuarial value of assets at December 31, 2012	1,274,813
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,276,725
7. Total actuarial gain/(loss) *(3. + 6.)*	**$179,816**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$0**
2. Expected increase	0
3. Liability (gain)/loss	1,096,909
4. Asset (gain)/loss	(1,276,725)
5. Change due to changes in assumptions, methods, and plan provisions	(8,053)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**($185,957)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$17,161	$102,915	16.67%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$17,161**	**$102,915**	**16.67%**	**$0**	**$0**	**0.00%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($185,957)	$0
2. Next year's Tier 1/Tier 2 UAL payment	(13,460)	0
3. Combined valuation payroll	336,946	0
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.99%)	0.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.67%	N/A
b. Tier 1/Tier 2 UAL rate	(3.99%)	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	12.81%	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.81%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.81%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.67%	N/A
b. Tier 1/Tier 2 UAL rate	(3.99%)	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.81%	N/A

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$102,915	$102,915
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	102,915	102,915
OPSRP valuation payroll	68,825	165,206	234,031
Combined valuation payroll	**$68,825**	**$268,121**	**$336,946**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	0	0
Police & Fire	1	0	2	3	0	0	0	0
Total	1	0	3	4	0	0	0	0
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	9	7	N/A	16	0	0	N/A	0
Total	9	7	N/A	16	0	0	N/A	0
Dormant Members								
General Service	0	1	0	1	0	0	0	0
Police & Fire	0	6	0	6	0	0	0	0
Total	0	7	0	7	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	3	0	0	3	0	0	0	0
Total	3	0	0	3	0	0	0	0
Grand Total Number of Members	**13**	**14**	**3**	**30**	**0**	**0**	**0**	**0**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49					1					1
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	1	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	394
35-39	1	172
40-44	1	210
45-49	1	31
50-54	2	191
55-59		
60-64	1	795
65-69		
70-74		
75+		
Total	7	283

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	17
60-64		
65-69	1	3,161
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	3	1,065

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Tri-County Cooperative Weed Management Area/2865
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Tri-County Cooperative Weed Management Area/2865

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Tri-County Cooperative Weed Management Area -- #2865

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Tri-County Cooperative Weed Management Area to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tri-County Cooperative Weed Management Area.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Tri-County Cooperative Weed Management Area

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.15%	0.15%	0.15%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.08%**	**8.11%**	**12.21%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.64%**	**8.59%**	**12.69%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 100%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.48%	14.48%
Minimum July 1, 2015 Rate	11.48%	8.48%
Maximum July 1, 2015 Rate	17.48%	20.48%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$49,323	0%
12/31/2008	(99)	0	99	0%	76,517	0%
12/31/2009	(155)	0	155	0%	76,926	0%
12/31/2010	(252)	0	252	0%	113,522	0%
12/31/2011	(275)	0	275	100%	114,758	0%
12/31/2012	(295)	0	295	0%	96,745	0%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Tri-County Cooperative Weed Management Area

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$295	$275
Allocated pooled OPSRP UAL	6,819	1,958
Side account	0	0
Net unfunded pension actuarial accrued liability	7,114	2,233
Combined valuation payroll	96,745	114,758
Net pension UAL as a percentage of payroll	7%	2%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,030	$2,973

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
Tier 1/ Tier 2 Actuarial accrued liability	$0	$0
Actuarial asset value	(295)	(275)
Tier 1/Tier 2 Unfunded actuarial accrued liability	295	275
Tier 1/ Tier 2 Funded status	0%	0%
Combined valuation payroll	$96,745	$114,758
Tier 1/Tier 2 UAL as a percentage of payroll	0%	0%
Tier 1/Tier 2 UAL rate	0.15%	0.15%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	96,745	114,758
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	(295)	(275)
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**($295)**	**($275)**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	($275)
2.	Regular employer contributions	134
3.	Benefit payments and expenses	0
4.	Adjustments[2]	(150)
5.	Interest credited	(3)
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**($295)**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$0**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$0	$0
2. Actuarial value of assets	(295)	(275)
3. Unfunded accrued liability *(1. – 2.)*	295	275
4. Funded percentage *(2. ÷ 1.)*	100%	100%
5. Combined valuation payroll	$96,745	$114,758
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	0%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$295	$21
Total				**$295**	**$21**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$0
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	0
2. Actuarial accrued liability at December 31, 2012	0
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	(275)
b. Contributions for 2012[1]	134
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	(17)
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	(158)
5. Actuarial value of assets at December 31, 2012	(295)
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(137)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($137)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$275**
2. Expected increase	(117)
3. Liability (gain)/loss	0
4. Asset (gain)/loss	137
5. Change due to changes in assumptions, methods, and plan provisions	0
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$295**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**14.33%**	**$0**	**$0**	**10.82%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$295	$275
2. Next year's Tier 1/Tier 2 UAL payment	21	20
3. Combined valuation payroll	96,745	114,758
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.02%	0.02%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	0.02%	0.02%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.48%	10.97%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.48%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.48%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	0.02%	0.02%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.48%	10.97%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	96,745	0	96,745
Combined valuation payroll	**$96,745**	**$0**	**$96,745**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	2	2	0	0	3	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	2	2	0	0	3	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**0**	**2**	**2**	**0**	**0**	**3**	**3**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Town of Butte Falls/2253
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Town of Butte Falls/2253

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Town of Butte Falls -- #2253

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Town of Butte Falls to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Town of Butte Falls.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Town of Butte Falls

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	26.05%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(17.64%)	(17.64%)	(17.64%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**0.48%**	**0.48%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 119%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$218,103	$156,847	($61,256)	139%	$58,845	(104%)
12/31/2008	161,386	168,410	7,024	96%	78,132	9%
12/31/2009	183,862	167,980	(15,882)	109%	107,885	(15%)
12/31/2010	197,488	178,619	(18,869)	111%	112,140	(17%)
12/31/2011	198,605	200,004	1,399	99%	86,198	2%
12/31/2012	227,332	191,168	(36,164)	119%	55,627	(65%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Town of Butte Falls

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($36,164)	$1,399
Allocated pooled OPSRP UAL	3,921	1,471
Side account	0	0
Net unfunded pension actuarial accrued liability	(32,243)	2,870
Combined valuation payroll	55,627	86,198
Net pension UAL as a percentage of payroll	(58%)	3%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,167	$2,233

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$4,748	$407
Tier 1/Tier 2 valuation payroll	18,229	15,521
Tier 1/Tier 2 pension normal cost rate	26.05%	5.62%
Tier 1/ Tier 2 Actuarial accrued liability	$191,168	$200,004
Actuarial asset value	227,332	198,605
Tier 1/Tier 2 Unfunded actuarial accrued liability	(36,164)	1,399
Tier 1/ Tier 2 Funded status	119%	99%
Combined valuation payroll	$55,627	$86,198
Tier 1/Tier 2 UAL as a percentage of payroll	(65%)	2%
Tier 1/Tier 2 UAL rate	(17.64%)	(0.21%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	4	3
Tier 1/Tier 2 retirees and beneficiaries	3	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	55,627	86,198
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$47,730	$41,755
2. Employer reserves	160,045	137,985
3. Benefits in force reserve	19,558	18,864
4. Total market value of assets ***(1. + 2. + 3.)***	**$227,332**	**$198,605**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$198,605
2. Regular employer contributions	2,031
3. Benefit payments and expenses	(3,072)
4. Adjustments[2]	2,846
5. Interest credited	26,923
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$227,332**

1 *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

2 *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$4,410	$68
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	338	339
Total	**$4,748**	**$407**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$417	$4,748	$4,331

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$34,941	$31,962
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	29,065	60,243
▪ Tier 2 General Service	1,500	1,802
▪ **Total Active Members**	**$65,506**	**$94,007**
Dormant Members	92,704	71,687
Retired Members and Beneficiaries	32,958	34,310
Total Actuarial Accrued Liability	**$191,168**	**$200,004**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$205,893	$191,168	($14,725)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$191,168	$200,004
2. Actuarial value of assets	227,332	198,605
3. Unfunded accrued liability *(1. – 2.)*	(36,164)	1,399
4. Funded percentage *(2. ÷ 1.)*	119%	99%
5. Combined valuation payroll	$55,627	$86,198
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(65%)	2%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($36,164)	($2,618)
Total				**($36,164)**	**($2,618)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$200,004
b. Normal cost at December 31, 2011	407
c. Benefit payments during 2012	(3,048)
d. Interest at 8.0% to December 31, 2012	15,911
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	213,274
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(14,725)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	198,549
2. Actuarial accrued liability at December 31, 2012	191,168
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	7,381
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	198,605
b. Contributions for 2012[1]	2,031
c. Benefit payments and expenses during 2012	(3,072)
d. Interest at 8.0% to December 31, 2012	15,847
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	213,410
5. Actuarial value of assets at December 31, 2012	227,332
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	13,922
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$21,303**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,399**
2. Expected increase	(1,535)
3. Liability (gain)/loss	(7,381)
4. Asset (gain)/loss	(13,922)
5. Change due to changes in assumptions, methods, and plan provisions	(14,725)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($36,164)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$4,410	$15,310	28.80%	$68	$12,638	0.54%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	338	2,919	11.58%	339	2,883	11.76%
Total	**$4,748**	**$18,229**	**26.05%**	**$407**	**$15,521**	**2.62%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($36,164)	$1,399
2. Next year's Tier 1/Tier 2 UAL payment	(2,618)	(432)
3. Combined valuation payroll	55,627	86,198
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(4.71%)	(0.50%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	26.05%	2.62%
b. Tier 1/Tier 2 UAL rate	(4.71%)	(0.50%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	21.47%	2.25%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	119%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	21.47%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(13.06%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(4.71%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(17.77%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	26.05%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	26.05%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	26.05%	5.62%
b. Tier 1/Tier 2 UAL rate	(17.77%)	(0.34%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$15,310	$15,310
Tier 2	2,919	0	2,919
Tier 1/Tier 2 valuation payroll	2,919	15,310	18,229
OPSRP valuation payroll	0	37,398	37,398
Combined valuation payroll	**$2,919**	**$52,708**	**$55,627**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	1	1
Police & Fire	1	0	1	2	1	0	1	2
Total	1	0	1	2	1	0	2	3
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	0	1	N/A	1
Police & Fire	1	0	N/A	1	1	2	N/A	3
Total	1	1	N/A	2	1	3	N/A	4
Dormant Members								
General Service	0	0	1	1	0	0	1	1
Police & Fire	1	3	0	4	1	2	0	3
Total	1	3	1	5	1	2	1	4
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	1	0	3	2	1	0	3
Total	2	1	0	3	2	1	0	3
Grand Total Number of Members	**5**	**5**	**2**	**12**	**5**	**6**	**3**	**14**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49				1						**1**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	318
45-49	2	33
50-54		
55-59	1	453
60-64		
65-69		
70-74		
75+		
Total	4	209

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	89
60-64		
65-69	1	85
70-74		
75-79		
80-84	1	111
85-89		
90-94		
95-99		
100+		
Total	3	95

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Tillamook Fire District/2783
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

Milliman

December 2013
Tillamook Fire District/2783

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Tillamook Fire District/2783

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Tillamook Fire District -- #2783

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Tillamook Fire District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tillamook Fire District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Tillamook Fire District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.00%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.16%)	(3.16%)	(3.16%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.44%**	**4.80%**	**8.90%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.00%**	**5.28%**	**9.38%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 105%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	9.84%	9.84%
Minimum July 1, 2015 Rate	6.84%	3.84%
Maximum July 1, 2015 Rate	12.84%	15.84%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$782,193	$561,996	($220,197)	139%	$217,679	(101%)
12/31/2008	596,084	642,641	46,557	93%	235,076	20%
12/31/2009	668,508	632,050	(36,458)	106%	196,215	(19%)
12/31/2010	737,343	675,041	(62,302)	109%	208,067	(30%)
12/31/2011	755,393	729,306	(26,087)	104%	265,563	(10%)
12/31/2012	863,045	819,757	(43,288)	105%	273,216	(16%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Tillamook Fire District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($43,288)	($26,087)
Allocated pooled OPSRP UAL	19,257	4,531
Side account	0	0
Net unfunded pension actuarial accrued liability	(24,031)	(21,556)
Combined valuation payroll	273,216	265,563
Net pension UAL as a percentage of payroll	(9%)	(8%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$5,732	$6,880

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$34,343	$32,276
Tier 1/Tier 2 valuation payroll	214,619	209,811
Tier 1/Tier 2 pension normal cost rate	16.00%	15.38%
Tier 1/ Tier 2 Actuarial accrued liability	$819,757	$729,306
Actuarial asset value	863,045	755,393
Tier 1/Tier 2 Unfunded actuarial accrued liability	(43,288)	(26,087)
Tier 1/ Tier 2 Funded status	105%	104%
Combined valuation payroll	$273,216	$265,563
Tier 1/Tier 2 UAL as a percentage of payroll	(16%)	(10%)
Tier 1/Tier 2 UAL rate	(3.16%)	(2.54%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	273,216	265,563
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$72,317	$63,553
2. Employer reserves	615,947	521,923
3. Benefits in force reserve	174,781	169,916
4. Total market value of assets ***(1. + 2. + 3.)***	**$863,045**	**$755,393**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$755,393
2. Regular employer contributions	16,904
3. Benefit payments and expenses	(27,451)
4. Adjustments [2]	13,204
5. Interest credited	104,995
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$863,045**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$15,199	$14,662
Tier 1 General Service	0	0
Tier 2 Police & Fire	19,144	17,614
Tier 2 General Service	0	0
Total	**$34,343**	**$32,276**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$33,746	$34,343	$597

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$306,807	$275,451
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	218,419	144,821
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$525,226**	**$420,272**
Dormant Members	0	0
Retired Members and Beneficiaries	294,531	309,034
Total Actuarial Accrued Liability	**$819,757**	**$729,306**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$781,250	$819,757	$38,507

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$819,757	$729,306
2. Actuarial value of assets	863,045	755,393
3. Unfunded accrued liability *(1. – 2.)*	(43,288)	(26,087)
4. Funded percentage *(2. ÷ 1.)*	105%	104%
5. Combined valuation payroll	$273,216	$265,563
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(16%)	(10%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($43,288)	($3,133)
Total				**($43,288)**	**($3,133)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$729,306
b. Normal cost at December 31, 2011	32,276
c. Benefit payments during 2012	(27,236)
d. Interest at 8.0% to December 31, 2012	59,837
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	794,183
f. Change in actuarial accrued liability due to assumption, method, and plan changes	38,507
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	832,690
2. Actuarial accrued liability at December 31, 2012	819,757
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	12,933
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	755,393
b. Contributions for 2012[1]	16,904
c. Benefit payments and expenses during 2012	(27,451)
d. Interest at 8.0% to December 31, 2012	60,010
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	804,855
5. Actuarial value of assets at December 31, 2012	863,045
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	58,190
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$71,123**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($26,087)**
2. Expected increase	15,415
3. Liability (gain)/loss	(12,933)
4. Asset (gain)/loss	(58,190)
5. Change due to changes in assumptions, methods, and plan provisions	38,507
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($43,288)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$15,199	$83,373	18.23%	$14,662	$82,172	17.84%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	19,144	131,246	14.59%	17,614	127,639	13.80%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$34,343**	**$214,619**	**16.00%**	**$32,276**	**$209,811**	**15.38%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($43,288)	($26,087)
2. Next year's Tier 1/Tier 2 UAL payment	(3,133)	(3,768)
3. Combined valuation payroll	273,216	265,563
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(1.15%)	(1.42%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.00%	15.38%
b. Tier 1/Tier 2 UAL rate	(1.15%)	(1.42%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.98%	14.09%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.84%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.84%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.97%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	105%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.84%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	12.84%
7. July 1, 2015 total pension rate, before adjustment	14.98%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.14%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(1.15%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.29%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.84%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.00%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.00%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.84%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.00%	15.38%
b. Tier 1/Tier 2 UAL rate	(3.29%)	(2.67%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.84%	12.84%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$83,373	$83,373
Tier 2	0	131,246	131,246
Tier 1/Tier 2 valuation payroll	0	214,619	214,619
OPSRP valuation payroll	0	58,597	58,597
Combined valuation payroll	**$0**	**$273,216**	**$273,216**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	2	1	4	1	2	1	4
Total	1	2	1	4	1	2	1	4
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	3	1	0	4	3	1	0	4
Total	4	1	0	5	4	1	0	5
Grand Total Number of Members	**5**	**3**	**1**	**9**	**5**	**3**	**1**	**9**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							1
40-44		1								1
45-49										
50-54										
55-59				1						1
60-64										
65-69										
70-74										
75+										
Total	0	1	1	1	0	0	0	0	0	3

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	600
65-69	3	298
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	419

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Tillamook County Soil And Water Conservation District/2821
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

December 2013
Tillamook County Soil And Water Conservation District/2821

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Tillamook County Soil And Water Conservation District/2821

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Tillamook County Soil And Water Conservation District -- #2821

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Tillamook County Soil And Water Conservation District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tillamook County Soil And Water Conservation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Tillamook County Soil And Water Conservation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	10.50%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	1.99%	1.99%	1.99%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.09%**	**9.95%**	**14.05%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**13.65%**	**10.43%**	**14.53%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 95%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.69%	13.69%
Minimum July 1, 2015 Rate	10.69%	7.69%
Maximum July 1, 2015 Rate	16.69%	19.69%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$131,762	$172,308	$40,546	76%	$68,926	59%
12/31/2008	117,920	186,756	68,836	63%	73,289	94%
12/31/2009	160,075	207,194	47,119	77%	74,841	63%
12/31/2010	224,527	251,501	26,974	89%	62,899	43%
12/31/2011	238,346	275,346	37,000	87%	58,527	63%
12/31/2012	285,362	301,823	16,461	95%	63,910	26%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Tillamook County Soil And Water Conservation District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$16,461	$37,000
Allocated pooled OPSRP UAL	4,505	999
Side account	0	0
Net unfunded pension actuarial accrued liability	20,966	37,999
Combined valuation payroll	63,910	58,527
Net pension UAL as a percentage of payroll	33%	65%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,341	$1,516

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$6,713	$6,238
Tier 1/Tier 2 valuation payroll	63,910	58,527
Tier 1/Tier 2 pension normal cost rate	10.50%	10.66%
Tier 1/ Tier 2 Actuarial accrued liability	$301,823	$275,346
Actuarial asset value	285,362	238,346
Tier 1/Tier 2 Unfunded actuarial accrued liability	16,461	37,000
Tier 1/ Tier 2 Funded status	95%	87%
Combined valuation payroll	$63,910	$58,527
Tier 1/Tier 2 UAL as a percentage of payroll	26%	63%
Tier 1/Tier 2 UAL rate	1.99%	5.53%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	3	3
Tier 1/Tier 2 retirees and beneficiaries	0	0

1 *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	63,910	58,527
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$68,858	$59,319
2. Employer reserves	216,504	179,027
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$285,362**	**$238,346**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$238,346
2. Regular employer contributions	10,336
3. Benefit payments and expenses	0
4. Adjustments [2]	421
5. Interest credited	36,259
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$285,362**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	6,713	6,238
Total	**$6,713**	**$6,238**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$6,458	$6,713	$255

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	22,320	27,974
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	193,399	169,446
▪ **Total Active Members**	**$215,719**	**$197,420**
Dormant Members	86,104	77,926
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$301,823**	**$275,346**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$308,977	$301,823	($7,154)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$301,823	$275,346
2. Actuarial value of assets	285,362	238,346
3. Unfunded accrued liability *(1. – 2.)*	16,461	37,000
4. Funded percentage *(2. ÷ 1.)*	95%	87%
5. Combined valuation payroll	$63,910	$58,527
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	26%	63%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$16,461	$1,191
Total				**$16,461**	**$1,191**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$275,346
b. Normal cost at December 31, 2011	6,238
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	22,527
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	304,111
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(7,154)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	296,957
2. Actuarial accrued liability at December 31, 2012	301,823
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(4,866)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	238,346
b. Contributions for 2012[1]	10,336
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	19,481
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	268,163
5. Actuarial value of assets at December 31, 2012	285,362
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	17,198
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$12,332**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$37,000**
2. Expected increase	(1,053)
3. Liability (gain)/loss	4,866
4. Asset (gain)/loss	(17,198)
5. Change due to changes in assumptions, methods, and plan provisions	(7,154)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$16,461**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	6,713	63,910	10.50%	6,238	58,527	10.66%
Total	**$6,713**	**$63,910**	**10.50%**	**$6,238**	**$58,527**	**10.66%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$16,461	$37,000
2. Next year's Tier 1/Tier 2 UAL payment	1,191	3,158
3. Combined valuation payroll	63,910	58,527
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.86%	5.40%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.50%	10.66%
b. Tier 1/Tier 2 UAL rate	1.86%	5.40%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	12.49%	16.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.69%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.69%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	95%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.69%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.69%
7. July 1, 2015 total pension rate, before adjustment	12.49%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.86%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.86%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.49%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	10.50%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	10.50%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.49%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.50%	10.66%
b. Tier 1/Tier 2 UAL rate	1.86%	5.40%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.49%	16.19%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	63,910	0	63,910
Tier 1/Tier 2 valuation payroll	63,910	0	63,910
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$63,910**	**$0**	**$63,910**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	2	0	2	0	2	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	2	0	2
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	1	1	N/A	2
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	1	1	N/A	2
Dormant Members								
General Service	0	3	0	3	0	3	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	3	0	3
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**6**	**0**	**6**	**1**	**6**	**0**	**7**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59				1						**1**
60-64				1						**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	12
45-49	1	537
50-54		
55-59	1	436
60-64		
65-69		
70-74		
75+		
Total	3	328

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Tillamook 9-1-1/2722
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

December 2013
Tillamook 9-1-1/2722

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Tillamook 9-1-1/2722

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Tillamook 9-1-1 -- #2722

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Tillamook 9-1-1 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tillamook 9-1-1.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Tillamook 9-1-1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.81%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(5.59%)	(5.59%)	(5.59%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.82%**	**2.37%**	**6.47%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**7.38%**	**2.85%**	**6.95%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 125%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,723,801	$1,367,483	($356,318)	126%	$511,057	(70%)
12/31/2008	1,378,769	1,363,027	(15,742)	101%	482,292	(3%)
12/31/2009	1,613,075	1,537,544	(75,531)	105%	522,840	(14%)
12/31/2010	1,755,810	1,582,886	(172,924)	111%	488,423	(35%)
12/31/2011	1,800,706	1,660,388	(140,318)	108%	561,258	(25%)
12/31/2012	2,056,968	1,641,966	(415,002)	125%	525,267	(79%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

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	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($415,002)	($140,318)
Allocated pooled OPSRP UAL	37,022	9,576
Side account	0	0
Net unfunded pension actuarial accrued liability	(377,980)	(130,742)
Combined valuation payroll	525,267	561,258
Net pension UAL as a percentage of payroll	(72%)	(23%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$11,020	$14,540

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$27,414	$18,230
Tier 1/Tier 2 valuation payroll	232,176	287,009
Tier 1/Tier 2 pension normal cost rate	11.81%	7.72%
Tier 1/ Tier 2 Actuarial accrued liability	$1,641,966	$1,660,388
Actuarial asset value	2,056,968	1,800,706
Tier 1/Tier 2 Unfunded actuarial accrued liability	(415,002)	(140,318)
Tier 1/ Tier 2 Funded status	125%	108%
Combined valuation payroll	$525,267	$561,258
Tier 1/Tier 2 UAL as a percentage of payroll	(79%)	(25%)
Tier 1/Tier 2 UAL rate	(5.59%)	(2.31%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	4	5
Tier 1/Tier 2 dormant members	6	4
Tier 1/Tier 2 retirees and beneficiaries	3	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	525,267	561,258
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$628,354	$548,299
2. Employer reserves	1,271,434	1,099,728
3. Benefits in force reserve	157,180	152,679
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,056,968**	**$1,800,706**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,800,706
2. Regular employer contributions	12,539
3. Benefit payments and expenses	(24,686)
4. Adjustments[2]	36,019
5. Interest credited	232,390
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,056,968**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	19,733	12,749
Tier 2 Police & Fire	0	0
Tier 2 General Service	7,681	5,481
Total	**$27,414**	**$18,230**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$15,942	$27,414	$11,472

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	630,829	1,017,009
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	169,885	114,113
▪ **Total Active Members**	**$800,714**	**$1,131,122**
Dormant Members	576,382	251,584
Retired Members and Beneficiaries	264,870	277,682
Total Actuarial Accrued Liability	**$1,641,966**	**$1,660,388**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,778,114	$1,641,966	($136,148)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,641,966	$1,660,388
2. Actuarial value of assets	2,056,968	1,800,706
3. Unfunded accrued liability *(1. – 2.)*	(415,002)	(140,318)
4. Funded percentage *(2. ÷ 1.)*	125%	108%
5. Combined valuation payroll	$525,267	$561,258
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(79%)	(25%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($415,002)	($30,038)
Total				**($415,002)**	**($30,038)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,660,388
b. Normal cost at December 31, 2011	18,230
c. Benefit payments during 2012	(24,493)
d. Interest at 8.0% to December 31, 2012	133,310
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,787,435
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(136,148)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,651,287
2. Actuarial accrued liability at December 31, 2012	1,641,966
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	9,321
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,800,706
b. Contributions for 2012[1]	12,539
c. Benefit payments and expenses during 2012	(24,686)
d. Interest at 8.0% to December 31, 2012	143,571
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,932,129
5. Actuarial value of assets at December 31, 2012	2,056,968
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	124,839
7. Total actuarial gain/(loss) *(3. + 6.)*	**$134,160**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($140,318)**
2. Expected increase	(4,376)
3. Liability (gain)/loss	(9,321)
4. Asset (gain)/loss	(124,839)
5. Change due to changes in assumptions, methods, and plan provisions	(136,148)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**($415,002)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	19,733	140,937	14.00%	12,749	196,710	6.48%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	7,681	91,239	8.42%	5,481	90,299	6.07%
Total	**$27,414**	**$232,176**	**11.81%**	**$18,230**	**$287,009**	**6.35%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($415,002)	($140,318)
2. Next year's Tier 1/Tier 2 UAL payment	(30,038)	(13,685)
3. Combined valuation payroll	525,267	561,258
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(5.72%)	(2.44%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.81%	6.35%
b. Tier 1/Tier 2 UAL rate	(5.72%)	(2.44%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	6.22%	4.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	125%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	6.22%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(5.72%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.72%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	6.22%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.81%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.81%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	6.22%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.81%	7.72%
b. Tier 1/Tier 2 UAL rate	(5.72%)	(2.44%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	6.22%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$140,937	$0	$140,937
Tier 2	91,239	0	91,239
Tier 1/Tier 2 valuation payroll	232,176	0	232,176
OPSRP valuation payroll	293,091	0	293,091
Combined valuation payroll	**$525,267**	**$0**	**$525,267**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	2	8	12	3	2	6	11
Police & Fire	0	0	0	0	0	0	0	0
Total	2	2	8	12	3	2	6	11
Active Members with previous service segments with the employer								
General Service	3	2	N/A	5	6	4	N/A	10
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	3	2	N/A	5	6	4	N/A	10
Dormant Members								
General Service	5	1	0	6	3	1	0	4
Police & Fire	0	0	0	0	0	0	0	0
Total	5	1	0	6	3	1	0	4
Retired Members and Beneficiaries								
General Service	3	0	0	3	3	0	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	3	0	0	3	3	0	0	3
Grand Total Number of Members	**13**	**5**	**8**	**26**	**15**	**7**	**6**	**28**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		1								**1**
35-39										
40-44		1			1					**2**
45-49					1					**1**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**4**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	2,504
45-49	1	1,927
50-54	3	1,053
55-59	1	557
60-64		
65-69		
70-74		
75+		
Total	6	1,358

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	177
60-64	1	89
65-69	1	1,759
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	3	675

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Tangent Rural Fire Protection District/2553
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

Milliman

December 2013
Tangent Rural Fire Protection District/2553

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Tangent Rural Fire Protection District/2553

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Tangent Rural Fire Protection District -- #2553

December 2013

CONTENTS

Executive Summary

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

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tangent Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Tangent Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.82%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	22.39%	22.39%	22.39%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**38.81%**	**30.35%**	**34.45%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**39.37%**	**30.83%**	**34.93%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 79%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	32.22%	32.22%
Minimum July 1, 2015 Rate	25.78%	19.34%
Maximum July 1, 2015 Rate	38.66%	45.10%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$800,139	$873,095	$72,956	92%	$67,715	108%
12/31/2008	574,792	903,382	328,590	64%	69,326	474%
12/31/2009	645,068	927,816	282,748	70%	120,311	235%
12/31/2010	688,450	956,927	268,477	72%	127,632	210%
12/31/2011	684,224	1,012,596	328,372	68%	68,245	481%
12/31/2012	775,729	985,556	209,827	79%	68,227	308%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Tangent Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$209,827	$328,372
Allocated pooled OPSRP UAL	4,809	1,164
Side account	0	0
Net unfunded pension actuarial accrued liability	214,636	329,536
Combined valuation payroll	68,227	68,245
Net pension UAL as a percentage of payroll	315%	483%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,431	$1,768

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$1,135	$3
Tier 1/Tier 2 valuation payroll	7,175	7,866
Tier 1/Tier 2 pension normal cost rate	15.82%	0.04%
Tier 1/ Tier 2 Actuarial accrued liability	$985,556	$1,012,596
Actuarial asset value	775,729	684,224
Tier 1/Tier 2 Unfunded actuarial accrued liability	209,827	328,372
Tier 1/ Tier 2 Funded status	79%	68%
Combined valuation payroll	$68,227	$68,245
Tier 1/Tier 2 UAL as a percentage of payroll	308%	481%
Tier 1/Tier 2 UAL rate	22.39%	36.58%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	3	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	**Continuing**	**Total**
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	68,227	68,245
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$108,396	$89,356
2. Employer reserves	293,036	231,915
3. Benefits in force reserve	374,297	362,953
4. Total market value of assets *(1. + 2. + 3.)*	**$775,729**	**$684,224**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$684,224
2. Regular employer contributions	24,427
3. Benefit payments and expenses	(58,786)
4. Adjustments [2]	33,735
5. Interest credited	92,129
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$775,729**

1 *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

2 *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$1,135	$3
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$1,135**	**$3**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$2	$1,135	$1,133

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$354,813	$124,017
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	228,463
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$354,813**	**$352,480**
Dormant Members	0	0
Retired Members and Beneficiaries	630,743	660,116
Total Actuarial Accrued Liability	**$985,556**	**$1,012,596**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,046,961	$985,556	($61,405)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$985,556	$1,012,596
2. Actuarial value of assets	775,729	684,224
3. Unfunded accrued liability *(1. – 2.)*	209,827	328,372
4. Funded percentage *(2. ÷ 1.)*	79%	68%
5. Combined valuation payroll	$68,227	$68,245
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	308%	481%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$209,827	$15,187
Total				**$209,827**	**$15,187**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,012,596
b. Normal cost at December 31, 2011	3
c. Benefit payments during 2012	(58,326)
d. Interest at 8.0% to December 31, 2012	78,675
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,032,948
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(61,405)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	971,543
2. Actuarial accrued liability at December 31, 2012	985,556
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(14,013)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	684,224
b. Contributions for 2012[1]	24,427
c. Benefit payments and expenses during 2012	(58,786)
d. Interest at 8.0% to December 31, 2012	53,364
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	703,229
5. Actuarial value of assets at December 31, 2012	775,729
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	72,501
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$58,488**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$328,372**
2. Expected increase	1,348
3. Liability (gain)/loss	14,013
4. Asset (gain)/loss	(72,501)
5. Change due to changes in assumptions, methods, and plan provisions	(61,405)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$209,827**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$1,135	$7,175	15.82%	$3	$7,866	0.04%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$1,135**	**$7,175**	**15.82%**	**$3**	**$7,866**	**0.04%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$209,827	$328,372
2. Next year's Tier 1/Tier 2 UAL payment	15,187	26,196
3. Combined valuation payroll	68,227	68,245
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	22.26%	38.39%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.82%	0.04%
b. Tier 1/Tier 2 UAL rate	22.26%	38.39%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	38.21%	38.56%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	32.22%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	32.22%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	6.44%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	6.44%
c. Funded percentage	79%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.44%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	25.78%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	38.66%
7. July 1, 2015 total pension rate, before adjustment	38.21%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	22.26%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	22.26%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	38.21%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.82%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.82%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	38.21%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.82%	0.04%
b. Tier 1/Tier 2 UAL rate	22.26%	36.45%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	38.21%	36.62%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$7,175	$7,175
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	7,175	7,175
OPSRP valuation payroll	0	61,052	61,052
Combined valuation payroll	**$0**	**$68,227**	**$68,227**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	1	2	0	1	1	2
Total	1	0	1	2	0	1	1	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	0	N/A	1	2	0	N/A	2
Total	1	0	N/A	1	2	0	N/A	2
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	2	0	0	2	2	0	0	2
Total	3	0	0	3	3	0	0	3
Grand Total Number of Members	**5**	**0**	**1**	**6**	**5**	**1**	**1**	**7**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69					1					**1**
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	3,387
55-59		
60-64		
65-69		
70-74	1	164
75-79		
80-84	1	1,676
85-89		
90-94		
95-99		
100+		
Total	3	1,742

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Sweet Home Cemetery/2643
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

December 2013
Sweet Home Cemetery/2643

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Sweet Home Cemetery/2643

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Sweet Home Cemetery -- #2643

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Sweet Home Cemetery to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Sweet Home Cemetery.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Sweet Home Cemetery

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.93%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	5.59%	5.59%	5.59%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**20.12%**	**13.55%**	**17.65%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**20.68%**	**14.03%**	**18.13%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 84%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	16.27%	16.27%
Minimum July 1, 2015 Rate	13.02%	9.77%
Maximum July 1, 2015 Rate	19.52%	22.77%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$539,747	$600,033	$60,286	90%	$103,589	58%
12/31/2008	456,186	624,677	168,491	73%	106,308	158%
12/31/2009	542,212	681,951	139,739	80%	108,913	128%
12/31/2010	612,989	739,059	126,070	83%	111,990	113%
12/31/2011	350,642	511,257	160,615	69%	27,288	589%
12/31/2012	388,006	464,278	76,272	84%	84,731	90%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Sweet Home Cemetery

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$76,271	$160,615
Allocated pooled OPSRP UAL	5,972	466
Side account	0	0
Net unfunded pension actuarial accrued liability	82,243	161,081
Combined valuation payroll	84,731	27,288
Net pension UAL as a percentage of payroll	97%	590%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,778	$707

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$5,168	$0
Tier 1/Tier 2 valuation payroll	37,090	27,288
Tier 1/Tier 2 pension normal cost rate	13.93%	0.00%
Tier 1/ Tier 2 Actuarial accrued liability	$464,278	$511,257
Actuarial asset value	388,007	350,642
Tier 1/Tier 2 Unfunded actuarial accrued liability	76,271	160,615
Tier 1/ Tier 2 Funded status	84%	69%
Combined valuation payroll	$84,731	$27,288
Tier 1/Tier 2 UAL as a percentage of payroll	90%	589%
Tier 1/Tier 2 UAL rate	5.59%	20.67%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	84,731	27,288
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$72,338	$62,240
2. Employer reserves	135,594	112,512
3. Benefits in force reserve	180,075	175,890
4. Total market value of assets ***(1. + 2. + 3.)***	**$388,007**	**$350,642**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$350,642
2. Regular employer contributions	6,137
3. Benefit payments and expenses	(28,282)
4. Adjustments[2]	12,387
5. Interest credited	47,122
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$388,007**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	5,168	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$5,168**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$5,168	$5,168

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	107,305	139,965
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$107,305**	**$139,965**
Dormant Members	53,523	51,393
Retired Members and Beneficiaries	303,450	319,899
Total Actuarial Accrued Liability	**$464,278**	**$511,257**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$528,886	$464,278	($64,608)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$464,278	$511,257
2. Actuarial value of assets	388,007	350,642
3. Unfunded accrued liability *(1. – 2.)*	76,271	160,615
4. Funded percentage *(2. ÷ 1.)*	84%	69%
5. Combined valuation payroll	$84,731	$27,288
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	90%	589%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$76,271	$5,520
Total				**$76,271**	**$5,520**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$511,257
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	(28,061)
d. Interest at 8.0% to December 31, 2012	39,778
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	522,974
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(64,608)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	458,366
2. Actuarial accrued liability at December 31, 2012	464,278
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(5,912)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	350,642
b. Contributions for 2012[1]	6,137
c. Benefit payments and expenses during 2012	(28,282)
d. Interest at 8.0% to December 31, 2012	27,166
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	355,663
5. Actuarial value of assets at December 31, 2012	388,007
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	32,343
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$26,431**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$160,615**
2. Expected increase	6,695
3. Liability (gain)/loss	5,912
4. Asset (gain)/loss	(32,343)
5. Change due to changes in assumptions, methods, and plan provisions	(64,608)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$76,271**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	5,168	37,090	13.93%	0	27,288	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$5,168**	**$37,090**	**13.93%**	**$0**	**$27,288**	**0.00%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$76,271	$160,615
2. Next year's Tier 1/Tier 2 UAL payment	5,520	12,703
3. Combined valuation payroll	84,731	27,288
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.51%	46.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.93%	0.00%
b. Tier 1/Tier 2 UAL rate	6.51%	46.55%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.57%	46.68%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	16.27%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	16.27%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.25%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.25%
c. Funded percentage	84%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.25%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	13.02%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	19.52%
7. July 1, 2015 total pension rate, before adjustment	20.57%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.05%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.51%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	5.46%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	19.52%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.93%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.93%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	19.52%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.93%	0.00%
b. Tier 1/Tier 2 UAL rate	5.46%	20.54%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	19.52%	20.67%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$37,090	$0	$37,090
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	37,090	0	37,090
OPSRP valuation payroll	47,641	0	47,641
Combined valuation payroll	**$84,731**	**$0**	**$84,731**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	1	2	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**3**	**1**	**1**	**5**	**3**	**1**	**0**	**4**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54					1					**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	462
60-64		
65-69		
70-74		
75+		
Total	1	462

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	1,669
65-69		
70-74		
75-79		
80-84		
85-89	1	697
90-94		
95-99		
100+		
Total	2	1,183

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Sunrise Water Authority/2845
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System’s funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Sunrise Water Authority/2845

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Sunrise Water Authority -- #2845

Secondary Employers

2586	Mt Scott Water District
2656	Damascus Water District

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Sunrise Water Authority to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Sunrise Water Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Sunrise Water Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	10.43%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.48%	4.48%	4.48%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.51%**	**12.44%**	**16.54%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.07%**	**12.92%**	**17.02%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 74%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.91%	11.91%
Minimum July 1, 2015 Rate	8.91%	5.91%
Maximum July 1, 2015 Rate	14.91%	17.91%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$4,098,548	$3,697,138	($401,410)	111%	$1,531,271	(26%)
12/31/2008	3,054,311	3,881,452	827,141	79%	1,158,722	71%
12/31/2009	2,864,075	3,700,299	836,224	77%	948,066	88%
12/31/2010	3,071,750	3,823,574	751,824	80%	931,592	81%
12/31/2011	2,709,139	3,974,445	1,265,306	68%	1,060,987	119%
12/31/2012	2,973,563	4,013,502	1,039,939	74%	1,130,346	92%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Sunrise Water Authority

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,039,939	$1,265,306
Allocated pooled OPSRP UAL	79,670	18,103
Side account	0	0
Net unfunded pension actuarial accrued liability	1,119,609	1,283,409
Combined valuation payroll	1,130,346	1,060,987
Net pension UAL as a percentage of payroll	99%	121%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$23,715	$27,485

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$41,037	$31,946
Tier 1/Tier 2 valuation payroll	393,602	420,033
Tier 1/Tier 2 pension normal cost rate	10.43%	7.61%
Tier 1/ Tier 2 Actuarial accrued liability	$4,013,502	$3,974,445
Actuarial asset value	2,973,563	2,709,139
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,039,939	1,265,306
Tier 1/ Tier 2 Funded status	74%	68%
Combined valuation payroll	$1,130,346	$1,060,987
Tier 1/Tier 2 UAL as a percentage of payroll	92%	119%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	4.48%	8.70%
Tier 1/Tier 2 active members [1]	5	6
Tier 1/Tier 2 dormant members	8	7
Tier 1/Tier 2 retirees and beneficiaries	15	15

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,130,346	1,060,987
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$330,516	$289,295
2. Employer reserves	929,100	748,324
3. Benefits in force reserve	1,713,946	1,671,520
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,973,563**	**$2,709,139**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$2,709,139
2. Regular employer contributions	64,988
3. Benefit payments and expenses	(269,187)
4. Adjustments[2]	103,021
5. Interest credited	365,602
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,973,563**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	6,176	5,139
Tier 2 Police & Fire	0	0
Tier 2 General Service	34,861	26,807
Total	**$41,037**	**$31,946**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$35,739	$41,037	$5,298

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	199,044	337,913
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	590,312	406,474
▪ **Total Active Members**	**$789,356**	**$744,387**
Dormant Members	335,909	190,004
Retired Members and Beneficiaries	2,888,237	3,040,054
Total Actuarial Accrued Liability	**$4,013,502**	**$3,974,445**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$4,075,496	$4,013,502	($61,994)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$4,013,502	$3,974,445
2. Actuarial value of assets	2,973,563	2,709,139
3. Unfunded accrued liability *(1. – 2.)*	1,039,939	1,265,306
4. Funded percentage *(2. ÷ 1.)*	74%	68%
5. Combined valuation payroll	$1,130,346	$1,060,987
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	92%	119%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,039,939	$75,271
Total				**$1,039,939**	**$75,271**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$3,974,445
b. Normal cost at December 31, 2011	31,946
c. Benefit payments during 2012	(267,080)
d. Interest at 8.0% to December 31, 2012	309,828
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	4,049,139
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(61,994)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,987,145
2. Actuarial accrued liability at December 31, 2012	4,013,502
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(26,357)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,709,139
b. Contributions for 2012[1]	64,988
c. Benefit payments and expenses during 2012	(269,187)
d. Interest at 8.0% to December 31, 2012	208,563
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,713,503
5. Actuarial value of assets at December 31, 2012	2,973,563
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	260,060
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$233,703**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,265,306**
2. Expected increase	70,330
3. Liability (gain)/loss	26,357
4. Asset (gain)/loss	(260,060)
5. Change due to changes in assumptions, methods, and plan provisions	(61,994)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,039,939**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	6,176	64,056	9.64%	5,139	118,356	4.34%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	34,861	329,546	10.58%	26,807	301,677	8.89%
Total	**$41,037**	**$393,602**	**10.43%**	**$31,946**	**$420,033**	**7.61%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,039,939	$1,265,306
2. Next year's Tier 1/Tier 2 UAL payment	75,271	93,997
3. Combined valuation payroll	1,130,346	1,060,987
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.66%	8.86%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.43%	7.61%
b. Tier 1/Tier 2 UAL rate	6.66%	8.86%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.22%	16.60%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.91%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.91%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.38%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	74%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.91%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	14.91%
7. July 1, 2015 total pension rate, before adjustment	17.22%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.31%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.66%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.35%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.91%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	10.43%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	10.43%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.91%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.43%	7.61%
b. Tier 1/Tier 2 UAL rate	4.35%	8.57%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.91%	16.31%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$64,056	$0	$64,056
Tier 2	329,546	0	329,546
Tier 1/Tier 2 valuation payroll	393,602	0	393,602
OPSRP valuation payroll	736,744	0	736,744
Combined valuation payroll	**$1,130,346**	**$0**	**$1,130,346**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	4	12	17	2	4	11	17
Police & Fire	0	0	0	0	0	0	0	0
Total	1	4	12	17	2	4	11	17
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	2	1	N/A	3
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	0	N/A	1	2	1	N/A	3
Dormant Members								
General Service	5	3	0	8	4	3	0	7
Police & Fire	0	0	0	0	0	0	0	0
Total	5	3	0	8	4	3	0	7
Retired Members and Beneficiaries								
General Service	15	0	0	15	15	0	0	15
Police & Fire	0	0	0	0	0	0	0	0
Total	15	0	0	15	15	0	0	15
Grand Total Number of Members	**22**	**7**	**12**	**41**	**23**	**8**	**11**	**42**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							1
40-44			2	1						3
45-49										
50-54										
55-59										
60-64										
65-69			1							1
70-74										
75+										
Total	0	0	4	1	0	0	0	0	0	5

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	4	1,326
50-54	2	0
55-59	1	46
60-64	1	607
65-69		
70-74		
75+		
Total	8	745

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	3	2,223
65-69	3	1,428
70-74	4	1,345
75-79	2	1,979
80-84	1	1,117
85-89	1	577
90-94	1	646
95-99		
100+		
Total	15	1,509

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Springfield Utility Board/2767
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Springfield Utility Board/2767

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Springfield Utility Board -- #2767

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Springfield Utility Board to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Springfield Utility Board.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Springfield Utility Board

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.46%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(5.05%)	(5.05%)	(5.05%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**2.91%**	**7.01%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**3.39%**	**7.49%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 117%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$198,276	$187,462	($10,814)	106%	$66,481	(16%)
12/31/2008	167,787	198,236	30,449	85%	68,162	45%
12/31/2009	204,111	219,285	15,174	93%	78,307	19%
12/31/2010	234,185	240,917	6,732	97%	77,075	9%
12/31/2011	248,311	257,708	9,397	96%	79,824	12%
12/31/2012	292,221	250,720	(41,501)	117%	83,649	(50%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Springfield Utility Board

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($41,501)	$9,397
Allocated pooled OPSRP UAL	5,896	1,362
Side account	0	0
Net unfunded pension actuarial accrued liability	(35,605)	10,759
Combined valuation payroll	83,649	79,824
Net pension UAL as a percentage of payroll	(43%)	13%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,755	$2,068

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$11,263	$2,313
Tier 1/Tier 2 valuation payroll	83,649	79,824
Tier 1/Tier 2 pension normal cost rate	13.46%	3.29%
Tier 1/ Tier 2 Actuarial accrued liability	$250,720	$257,708
Actuarial asset value	292,221	248,311
Tier 1/Tier 2 Unfunded actuarial accrued liability	(41,501)	9,397
Tier 1/ Tier 2 Funded status	117%	96%
Combined valuation payroll	$83,649	$79,824
Tier 1/Tier 2 UAL as a percentage of payroll	(50%)	12%
Tier 1/Tier 2 UAL rate	(5.05%)	2.12%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	83,649	79,824
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$103,296	$89,522
2. Employer reserves	188,925	158,789
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$292,221**	**$248,311**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$248,311
2.	Regular employer contributions	6,481
3.	Benefit payments and expenses	0
4.	Adjustments [2]	4,793
5.	Interest credited	32,636
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$292,221**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	11,263	2,313
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$11,263**	**$2,313**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$3,849	$11,263	$7,414

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	250,720	257,708
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$250,720**	**$257,708**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$250,720**	**$257,708**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$283,478	$250,720	($32,758)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$250,720	$257,708
2. Actuarial value of assets	292,221	248,311
3. Unfunded accrued liability *(1. – 2.)*	(41,501)	9,397
4. Funded percentage *(2. ÷ 1.)*	117%	96%
5. Combined valuation payroll	$83,649	$79,824
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(50%)	12%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($41,501)	($3,004)
Total				**($41,501)**	**($3,004)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$257,708
b. Normal cost at December 31, 2011	2,313
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	20,802
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	280,823
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(32,758)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	248,065
2. Actuarial accrued liability at December 31, 2012	250,720
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(2,655)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	248,311
b. Contributions for 2012[1]	6,481
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	20,124
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	274,916
5. Actuarial value of assets at December 31, 2012	292,221
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	17,305
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$14,650**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$9,397**
2. Expected increase	(3,490)
3. Liability (gain)/loss	2,655
4. Asset (gain)/loss	(17,305)
5. Change due to changes in assumptions, methods, and plan provisions	(32,758)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($41,501)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	11,263	83,649	13.46%	2,313	79,824	2.90%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$11,263**	**$83,649**	**13.46%**	**$2,313**	**$79,824**	**2.90%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($41,501)	$9,397
2. Next year's Tier 1/Tier 2 UAL payment	(3,004)	515
3. Combined valuation payroll	83,649	79,824
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.59%)	0.65%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.46%	2.90%
b. Tier 1/Tier 2 UAL rate	(3.59%)	0.65%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.00%	3.68%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	117%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	10.00%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.59%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(3.59%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.18%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.46%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.46%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.46%	3.29%
b. Tier 1/Tier 2 UAL rate	(5.18%)	1.99%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$83,649	$0	$83,649
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	83,649	0	83,649
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$83,649**	**$0**	**$83,649**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54					1					**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

Southwestern Polk County Rural Fire Protection District/2803
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Southwestern Polk County Rural Fire Protection District/2803

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Southwestern Polk County Rural Fire Protection District -- #2803

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Southwestern Polk County Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Southwestern Polk County Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Southwestern Polk County Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.69%)	(2.69%)	(2.69%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.24%**	**5.27%**	**9.37%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.80%**	**5.75%**	**9.85%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 126%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.64%	11.64%
Minimum July 1, 2015 Rate	8.64%	5.64%
Maximum July 1, 2015 Rate	14.64%	17.64%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$91,868	$61,210	($30,658)	150%	$33,405	(92%)
12/31/2008	65,605	60,353	(5,252)	109%	33,525	(16%)
12/31/2009	74,517	59,350	(15,167)	126%	34,630	(44%)
12/31/2010	80,618	58,861	(21,757)	137%	36,315	(60%)
12/31/2011	67,029	59,440	(7,589)	113%	36,767	(21%)
12/31/2012	71,598	57,004	(14,594)	126%	37,423	(39%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

Southwestern Polk County Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($14,594)	($7,589)
Allocated pooled OPSRP UAL	2,638	627
Side account	0	0
Net unfunded pension actuarial accrued liability	(11,956)	(6,962)
Combined valuation payroll	37,423	36,767
Net pension UAL as a percentage of payroll	(32%)	(19%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$785	$952

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
Tier 1/ Tier 2 Actuarial accrued liability	$57,004	$59,440
Actuarial asset value	71,598	67,029
Tier 1/Tier 2 Unfunded actuarial accrued liability	(14,594)	(7,589)
Tier 1/ Tier 2 Funded status	126%	113%
Combined valuation payroll	$37,423	$36,767
Tier 1/Tier 2 UAL as a percentage of payroll	(39%)	(21%)
Tier 1/Tier 2 UAL rate	(2.69%)	(2.20%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	37,423	36,767
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	37,771	34,347
3. Benefits in force reserve	33,827	32,682
4. Total market value of assets ***(1. + 2. + 3.)***	**$71,598**	**$67,029**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$67,029
2.	Regular employer contributions	(1,284)
3.	Benefit payments and expenses	(5,313)
4.	Adjustments[2]	2,134
5.	Interest credited	9,032
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$71,598**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	57,004	59,440
Total Actuarial Accrued Liability	**$57,004**	**$59,440**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$59,178	$57,004	($2,174)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$57,004	$59,440
2. Actuarial value of assets	71,598	67,029
3. Unfunded accrued liability *(1. – 2.)*	(14,594)	(7,589)
4. Funded percentage *(2. ÷ 1.)*	126%	113%
5. Combined valuation payroll	$37,423	$36,767
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(39%)	(21%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($14,594)	($1,056)
Total				**($14,594)**	**($1,056)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$59,440
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	(5,271)
d. Interest at 8.0% to December 31, 2012	4,544
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	58,713
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(2,174)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	56,539
2. Actuarial accrued liability at December 31, 2012	57,004
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(465)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	67,029
b. Contributions for 2012[1]	(1,284)
c. Benefit payments and expenses during 2012	(5,313)
d. Interest at 8.0% to December 31, 2012	5,098
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	65,531
5. Actuarial value of assets at December 31, 2012	71,598
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	6,067
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$5,602**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($7,589)**
2. Expected increase	771
3. Liability (gain)/loss	465
4. Asset (gain)/loss	(6,067)
5. Change due to changes in assumptions, methods, and plan provisions	(2,174)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($14,594)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**14.33%**	**$0**	**$0**	**10.82%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($14,594)	($7,589)
2. Next year's Tier 1/Tier 2 UAL payment	(1,056)	(856)
3. Combined valuation payroll	37,423	36,767
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.82%)	(2.33%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	(2.82%)	(2.33%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	11.64%	8.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.64%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.64%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	(2.82%)	(2.33%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.64%	8.62%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	37,423	0	37,423
Combined valuation payroll	**$37,423**	**$0**	**$37,423**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	1	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	1	0	1	0	1	0	1
Total	0	2	0	2	0	2	0	2
Grand Total Number of Members	**0**	**2**	**1**	**3**	**0**	**2**	**1**	**3**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	2	210
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	210

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

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

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

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

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

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

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

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

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

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

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

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

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

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

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

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

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

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

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

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

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

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

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

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December 2013

South Lane County Fire and Rescue/2859
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

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

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

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

Milliman

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

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
South Lane County Fire and Rescue/2859

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

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

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

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

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

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

South Lane County Fire and Rescue -- #2859

Secondary Employers

2827 Creswell Rural Fire Protection District

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for South Lane County Fire and Rescue to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to South Lane County Fire and Rescue.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for South Lane County Fire and Rescue

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.93%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	6.11%	6.11%	6.11%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**23.64%**	**14.07%**	**18.17%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**24.20%**	**14.55%**	**18.65%**

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

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 37%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	16.46%	16.46%
Minimum July 1, 2015 Rate	13.17%	9.88%
Maximum July 1, 2015 Rate	19.75%	23.04%

Executive Summary

Accounting Information

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

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$723,733	$874,577	$150,844	83%	$1,260,826	12%
12/31/2008	632,523	1,172,823	540,300	54%	1,219,019	44%
12/31/2009	817,056	1,603,224	786,168	51%	1,367,464	57%
12/31/2010	943,572	1,891,427	947,855	50%	1,483,211	64%
12/31/2011	1,034,896	2,162,175	1,127,279	48%	1,340,704	84%
12/31/2012	1,027,376	2,784,912	1,757,536	37%	1,671,543	105%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

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

South Lane County Fire and Rescue

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,757,536	$1,127,279
Allocated pooled OPSRP UAL	117,815	22,876
Side account	0	0
Net unfunded pension actuarial accrued liability	1,875,351	1,150,155
Combined valuation payroll	1,671,543	1,340,704
Net pension UAL as a percentage of payroll	112%	86%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$35,070	$34,732

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$128,881	$119,646
Tier 1/Tier 2 valuation payroll	761,205	713,018
Tier 1/Tier 2 pension normal cost rate	16.93%	16.78%
Tier 1/ Tier 2 Actuarial accrued liability	$2,784,912	$2,162,175
Actuarial asset value	1,027,376	1,034,896
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,757,536	1,127,279
Tier 1/ Tier 2 Funded status	37%	48%
Combined valuation payroll	$1,671,543	$1,340,704
Tier 1/Tier 2 UAL as a percentage of payroll	105%	84%
Tier 1/Tier 2 UAL rate	6.11%	4.08%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	8	8
Tier 1/Tier 2 dormant members	3	7
Tier 1/Tier 2 retirees and beneficiaries	6	4

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,671,543	1,340,704
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$47,381	$73,302
2. Employer reserves	411,592	797,276
3. Benefits in force reserve	568,403	164,318
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,027,376**	**$1,034,896**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$1,034,896
2.	Regular employer contributions	114,267
3.	Benefit payments and expenses	(89,272)
4.	Adjustments[2]	(170,023)
5.	Interest credited	137,508
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,027,376**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$92,172	$88,043
Tier 1 General Service	7,823	7,207
Tier 2 Police & Fire	28,886	24,396
Tier 2 General Service	0	0
Total	**$128,881**	**$119,646**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$127,912	$128,881	$969

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$1,175,396	$932,402
▪ Tier 1 General Service	66,500	51,304
▪ Tier 2 Police & Fire	560,162	329,983
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$1,802,058**	**$1,313,689**
Dormant Members	25,017	549,635
Retired Members and Beneficiaries	957,837	298,851
Total Actuarial Accrued Liability	**$2,784,912**	**$2,162,175**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$2,639,952	$2,784,912	$144,960

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$2,784,912	$2,162,175
2. Actuarial value of assets	1,027,376	1,034,896
3. Unfunded accrued liability *(1. – 2.)*	1,757,536	1,127,279
4. Funded percentage *(2. ÷ 1.)*	37%	48%
5. Combined valuation payroll	$1,671,543	$1,340,704
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	105%	84%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,757,536	$127,210
Total				**$1,757,536**	**$127,210**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$2,162,175
b. Normal cost at December 31, 2011	119,646
c. Benefit payments during 2012	(88,573)
d. Interest at 8.0% to December 31, 2012	179,003
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	2,372,251
f. Change in actuarial accrued liability due to assumption, method, and plan changes	144,960
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	2,517,211
2. Actuarial accrued liability at December 31, 2012	2,784,912
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(267,701)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,034,896
b. Contributions for 2012[1]	114,267
c. Benefit payments and expenses during 2012	(89,272)
d. Interest at 8.0% to December 31, 2012	83,791
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,143,683
5. Actuarial value of assets at December 31, 2012	1,027,376
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(116,307)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($384,008)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,127,279**
2. Expected increase	101,289
3. Liability (gain)/loss	267,701
4. Asset (gain)/loss	116,307
5. Change due to changes in assumptions, methods, and plan provisions	144,960
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,757,536**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$92,172	$501,094	18.39%	$88,043	$483,429	18.21%
Tier 1 General Service	7,823	54,622	14.32%	7,207	54,332	13.26%
Tier 2 Police & Fire	28,886	205,489	14.06%	24,396	175,257	13.92%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$128,881**	**$761,205**	**16.93%**	**$119,646**	**$713,018**	**16.78%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,757,536	$1,127,279
2. Next year's Tier 1/Tier 2 UAL payment	127,210	87,822
3. Combined valuation payroll	1,671,543	1,340,704
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	7.61%	6.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.93%	16.78%
b. Tier 1/Tier 2 UAL rate	7.61%	6.55%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	24.67%	23.46%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	16.46%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	16.46%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.29%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.29%
c. Funded percentage	37%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.58%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.88%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	23.04%
7. July 1, 2015 total pension rate, before adjustment	24.67%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.63%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	7.61%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	5.98%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	23.04%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.93%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.93%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	23.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.93%	16.78%
b. Tier 1/Tier 2 UAL rate	5.98%	3.95%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	23.04%	20.86%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$54,622	$501,094	$555,716
Tier 2	0	205,489	205,489
Tier 1/Tier 2 valuation payroll	54,622	706,583	761,205
OPSRP valuation payroll	50,528	859,810	910,338
Combined valuation payroll	**$105,150**	**$1,566,393**	**$1,671,543**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	1	2	1	0	1	2
Police & Fire	5	2	10	17	5	2	8	15
Total	6	2	11	19	6	2	9	17
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	2	N/A	3	1	3	N/A	4
Total	1	2	N/A	3	1	3	N/A	4
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	1	1	0	2	3	3	0	6
Total	1	2	0	3	3	4	0	7
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	5	1	0	6	4	0	0	4
Total	5	1	0	6	4	0	0	4
Grand Total Number of Members	**13**	**7**	**11**	**31**	**14**	**9**	**9**	**32**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39			1							**1**
40-44			1	1						**2**
45-49					1					**1**
50-54					1					**1**
55-59					2					**2**
60-64					1					**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**2**	**1**	**5**	**0**	**0**	**0**	**0**	**8**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	221
45-49		
50-54	1	13
55-59	1	56
60-64		
65-69		
70-74		
75+		
Total	3	97

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	2,328
55-59	3	471
60-64	2	1,240
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	6	1,036

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Sisters-Camp Sherman Rural Fire Protection District/2701
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Sisters-Camp Sherman Rural Fire Protection District/2701

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Sisters-Camp Sherman Rural Fire Protection District/2701

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Sisters-Camp Sherman Rural Fire Protection District -- #2701

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Sisters-Camp Sherman Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Sisters-Camp Sherman Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Sisters-Camp Sherman Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.35%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.32%	4.32%	4.32%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**20.27%**	**12.28%**	**16.38%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**20.83%**	**12.76%**	**16.86%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 76%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	16.39%	16.39%
Minimum July 1, 2015 Rate	13.11%	9.83%
Maximum July 1, 2015 Rate	19.67%	22.95%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,019,549	$1,667,172	($352,377)	121%	$931,988	(38%)
12/31/2008	1,573,874	1,825,782	251,908	86%	1,024,272	25%
12/31/2009	1,935,927	2,233,819	297,892	87%	1,135,656	26%
12/31/2010	2,273,163	2,884,837	611,674	79%	1,269,035	48%
12/31/2011	2,164,565	2,972,903	808,338	73%	879,705	92%
12/31/2012	2,517,320	3,313,831	796,511	76%	1,179,483	68%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Sisters-Camp Sherman Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	$796,511	$808,338
Allocated pooled OPSRP UAL	83,133	15,010
Side account	0	0
Net unfunded pension actuarial accrued liability	879,644	823,348
Combined valuation payroll	1,179,483	879,705
Net pension UAL as a percentage of payroll	75%	94%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$24,746	$22,789

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$129,793	$95,051
Tier 1/Tier 2 valuation payroll	845,727	661,782
Tier 1/Tier 2 pension normal cost rate	15.35%	14.36%
Tier 1/ Tier 2 Actuarial accrued liability	$3,313,831	$2,972,903
Actuarial asset value	2,517,320	2,164,565
Tier 1/Tier 2 Unfunded actuarial accrued liability	796,511	808,338
Tier 1/ Tier 2 Funded status	76%	73%
Combined valuation payroll	$1,179,483	$879,705
Tier 1/Tier 2 UAL as a percentage of payroll	68%	92%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	4.32%	6.43%
Tier 1/Tier 2 active members [1]	8	7
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,179,483	879,705
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$281,510	$241,004
2. Employer reserves	1,553,054	1,217,371
3. Benefits in force reserve	682,757	706,190
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,517,320**	**$2,164,565**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$2,164,565
2.	Regular employer contributions	104,394
3.	Benefit payments and expenses	(107,232)
4.	Adjustments [2]	43,841
5.	Interest credited	311,752
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,517,320**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$82,840	$56,767
Tier 1 General Service	8,890	8,032
Tier 2 Police & Fire	33,370	26,841
Tier 2 General Service	4,693	3,411
Total	**$129,793**	**$95,051**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$141,131	$129,793	($11,338)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$1,198,358	$934,117
▪ Tier 1 General Service	219,856	195,642
▪ Tier 2 Police & Fire	511,343	370,546
▪ Tier 2 General Service	62,421	29,097
▪ **Total Active Members**	**$1,991,978**	**$1,529,402**
Dormant Members	171,314	159,128
Retired Members and Beneficiaries	1,150,539	1,284,373
Total Actuarial Accrued Liability	**$3,313,831**	**$2,972,903**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$3,280,984	$3,313,831	$32,847

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,313,831	$2,972,903
2. Actuarial value of assets	2,517,320	2,164,565
3. Unfunded accrued liability *(1. – 2.)*	796,511	808,338
4. Funded percentage *(2. ÷ 1.)*	76%	73%
5. Combined valuation payroll	$1,179,483	$879,705
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	68%	92%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$796,511	$57,651
Total				**$796,511**	**$57,651**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$2,972,903
b. Normal cost at December 31, 2011	95,051
c. Benefit payments during 2012	(106,392)
d. Interest at 8.0% to December 31, 2012	241,181
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,202,743
f. Change in actuarial accrued liability due to assumption, method, and plan changes	32,847
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,235,590
2. Actuarial accrued liability at December 31, 2012	3,313,831
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(78,241)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,164,565
b. Contributions for 2012[1]	104,394
c. Benefit payments and expenses during 2012	(107,232)
d. Interest at 8.0% to December 31, 2012	173,052
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,334,779
5. Actuarial value of assets at December 31, 2012	2,517,320
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	182,541
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$104,300**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$808,338**
2. Expected increase	59,626
3. Liability (gain)/loss	78,241
4. Asset (gain)/loss	(182,541)
5. Change due to changes in assumptions, methods, and plan provisions	32,847
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$796,511**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$82,840	$514,066	16.11%	$56,767	$336,355	16.88%
Tier 1 General Service	8,890	67,641	13.14%	8,032	65,178	12.32%
Tier 2 Police & Fire	33,370	207,243	16.10%	26,841	205,074	13.09%
Tier 2 General Service	4,693	56,777	8.27%	3,411	55,175	6.18%
Total	**$129,793**	**$845,727**	**15.35%**	**$95,051**	**$661,782**	**14.36%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$796,511	$808,338
2. Next year's Tier 1/Tier 2 UAL payment	57,651	58,692
3. Combined valuation payroll	1,179,483	879,705
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.89%	6.67%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.35%	14.36%
b. Tier 1/Tier 2 UAL rate	4.89%	6.67%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.37%	21.16%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	16.39%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	16.39%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.28%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.28%
c. Funded percentage	76%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.28%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	13.11%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	19.67%
7. July 1, 2015 total pension rate, before adjustment	20.37%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.70%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.89%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.19%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	19.67%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.35%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.35%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	19.67%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.35%	14.36%
b. Tier 1/Tier 2 UAL rate	4.19%	6.30%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate	19.67%	20.79%
(a. + b. + c., minimum of 5.44%)		

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$67,641	$514,066	$581,707
Tier 2	56,777	207,243	264,020
Tier 1/Tier 2 valuation payroll	124,418	721,309	845,727
OPSRP valuation payroll	0	333,756	333,756
Combined valuation payroll	**$124,418**	**$1,055,065**	**$1,179,483**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	1	0	2	1	1	0	2
Police & Fire	4	2	5	11	3	2	3	8
Total	5	3	5	13	4	3	3	10
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	1	N/A	1
Total	0	0	N/A	0	0	1	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	1	2	1	0	1	2
Total	1	0	1	2	1	0	1	2
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	4	1	0	5	4	1	0	5
Total	4	1	0	5	4	1	0	5
Grand Total Number of Members	**10**	**4**	**6**	**20**	**9**	**5**	**4**	**18**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39		1	1	1						3
40-44										
45-49		1				1				2
50-54				1						1
55-59				1						1
60-64					1					1
65-69										
70-74										
75+										
Total	0	2	1	3	1	1	0	0	0	8

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	2,417
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	2,417

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	1,867
60-64	1	2,275
65-69	1	1,140
70-74		
75-79	1	329
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	1,495

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Salmon Harbor-Douglas County/2675
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Salmon Harbor-Douglas County/2675

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Salmon Harbor-Douglas County -- #2675

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Salmon Harbor-Douglas County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Salmon Harbor-Douglas County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Salmon Harbor-Douglas County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.29%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(5.88%)	(5.88%)	(5.88%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**2.08%**	**6.18%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**2.56%**	**6.66%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 118%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,343,874	$1,137,130	($206,744)	118%	$472,680	(44%)
12/31/2008	1,080,491	1,219,367	138,876	89%	463,241	30%
12/31/2009	1,233,172	1,251,589	18,417	99%	488,950	4%
12/31/2010	1,383,010	1,389,813	6,803	100%	503,210	1%
12/31/2011	1,432,878	1,451,916	19,038	99%	508,435	4%
12/31/2012	1,345,487	1,136,722	(208,765)	118%	382,708	(55%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Salmon Harbor-Douglas County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($208,765)	$19,038
Allocated pooled OPSRP UAL	26,974	8,675
Side account	0	0
Net unfunded pension actuarial accrued liability	(181,791)	27,713
Combined valuation payroll	382,708	508,435
Net pension UAL as a percentage of payroll	(48%)	5%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$8,029	$13,171

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$37,976	$21,559
Tier 1/Tier 2 valuation payroll	265,794	354,787
Tier 1/Tier 2 pension normal cost rate	14.29%	6.08%
Tier 1/ Tier 2 Actuarial accrued liability	$1,136,722	$1,451,916
Actuarial asset value	1,345,487	1,432,878
Tier 1/Tier 2 Unfunded actuarial accrued liability	(208,765)	19,038
Tier 1/ Tier 2 Funded status	118%	99%
Combined valuation payroll	$382,708	$508,435
Tier 1/Tier 2 UAL as a percentage of payroll	(55%)	4%
Tier 1/Tier 2 UAL rate	(5.88%)	0.05%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	7	8
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	5	4

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	382,708	508,435
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$232,709	$391,146
2. Employer reserves	867,484	944,089
3. Benefits in force reserve	245,294	97,644
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,345,487**	**$1,432,878**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$1,432,878
2.	Regular employer contributions	26,038
3.	Benefit payments and expenses	(38,525)
4.	Adjustments[2]	(251,796)
5.	Interest credited	176,891
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,345,487**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	12,991	3,081
Tier 2 Police & Fire	0	0
Tier 2 General Service	24,985	18,478
Total	**$37,976**	**$21,559**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$23,273	$37,976	$14,703

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	288,842	890,533
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	289,659	242,763
▪ **Total Active Members**	**$578,501**	**$1,133,296**
Dormant Members	144,867	141,032
Retired Members and Beneficiaries	413,354	177,588
Total Actuarial Accrued Liability	**$1,136,722**	**$1,451,916**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,183,954	$1,136,722	($47,232)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,136,722	$1,451,916
2. Actuarial value of assets	1,345,487	1,432,878
3. Unfunded accrued liability *(1. – 2.)*	(208,765)	19,038
4. Funded percentage *(2. ÷ 1.)*	118%	99%
5. Combined valuation payroll	$382,708	$508,435
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(55%)	4%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($208,765)	($15,110)
Total				**($208,765)**	**($15,110)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,451,916
b. Normal cost at December 31, 2011	21,559
c. Benefit payments during 2012	(38,224)
d. Interest at 8.0% to December 31, 2012	116,349
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,551,600
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(47,232)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,504,368
2. Actuarial accrued liability at December 31, 2012	1,136,722
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	367,646
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,432,878
b. Contributions for 2012[1]	26,038
c. Benefit payments and expenses during 2012	(38,525)
d. Interest at 8.0% to December 31, 2012	114,131
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,534,522
5. Actuarial value of assets at December 31, 2012	1,345,487
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(189,035)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$178,611**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$19,038**
2. Expected increase	(1,960)
3. Liability (gain)/loss	(367,646)
4. Asset (gain)/loss	189,035
5. Change due to changes in assumptions, methods, and plan provisions	(47,232)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($208,765)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	12,991	85,549	15.19%	3,081	179,029	1.72%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	24,985	180,245	13.86%	18,478	175,758	10.51%
Total	**$37,976**	**$265,794**	**14.29%**	**$21,559**	**$354,787**	**6.08%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($208,765)	$19,038
2. Next year's Tier 1/Tier 2 UAL payment	(15,110)	(418)
3. Combined valuation payroll	382,708	508,435
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.95%)	(0.08%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.29%	6.08%
b. Tier 1/Tier 2 UAL rate	(3.95%)	(0.08%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.47%	6.13%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	118%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	10.47%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.06%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(3.95%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(6.01%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.29%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.29%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.29%	6.08%
b. Tier 1/Tier 2 UAL rate	(6.01%)	(0.08%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	6.13%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$85,549	$0	$85,549
Tier 2	180,245	0	180,245
Tier 1/Tier 2 valuation payroll	265,794	0	265,794
OPSRP valuation payroll	116,914	0	116,914
Combined valuation payroll	**$382,708**	**$0**	**$382,708**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	5	5	12	3	5	6	14
Police & Fire	0	0	0	0	0	0	0	0
Total	2	5	5	12	3	5	6	14
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	1	1	1	3	1	1	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	1	3	1	1	0	2
Retired Members and Beneficiaries								
General Service	5	0	0	5	4	0	0	4
Police & Fire	0	0	0	0	0	0	0	0
Total	5	0	0	5	4	0	0	4
Grand Total Number of Members	**8**	**6**	**6**	**20**	**8**	**6**	**6**	**20**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							1
35-39			1							1
40-44										
45-49				1						1
50-54										
55-59					1					1
60-64			1							1
65-69			2							2
70-74										
75+										
Total	**0**	**0**	**5**	**1**	**1**	**0**	**0**	**0**	**0**	**7**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69	2	601
70-74		
75+		
Total	2	601

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	872
65-69	1	81
70-74	1	245
75-79	1	1,606
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	735

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Salem Housing Authority/2747
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Salem Housing Authority/2747

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Salem Housing Authority/2747

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Salem Housing Authority -- #2747

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Salem Housing Authority to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Salem Housing Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Salem Housing Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.51%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	5.07%	5.07%	5.07%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.18%**	**13.03%**	**17.13%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.74%**	**13.51%**	**17.61%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 87%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.65%	14.65%
Minimum July 1, 2015 Rate	11.65%	8.65%
Maximum July 1, 2015 Rate	17.65%	20.65%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$10,870,655	$10,943,000	$72,345	99%	$2,396,321	3%
12/31/2008	7,603,858	10,799,496	3,195,638	70%	2,239,378	143%
12/31/2009	8,872,284	12,178,813	3,306,529	73%	2,575,374	128%
12/31/2010	9,319,449	12,223,232	2,903,783	76%	2,702,281	107%
12/31/2011	9,559,472	12,177,434	2,617,962	79%	2,434,177	108%
12/31/2012	10,563,890	12,164,784	1,600,894	87%	2,346,011	68%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Salem Housing Authority

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,600,894	$2,617,962
Allocated pooled OPSRP UAL	165,353	41,533
Side account	0	0
Net unfunded pension actuarial accrued liability	1,766,247	2,659,495
Combined valuation payroll	2,346,011	2,434,177
Net pension UAL as a percentage of payroll	75%	109%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$49,220	$63,059

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$199,978	$146,960
Tier 1/Tier 2 valuation payroll	1,598,993	1,729,691
Tier 1/Tier 2 pension normal cost rate	12.51%	8.50%
Tier 1/ Tier 2 Actuarial accrued liability	$12,164,784	$12,177,434
Actuarial asset value	10,563,890	9,559,472
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,600,894	2,617,962
Tier 1/ Tier 2 Funded status	87%	79%
Combined valuation payroll	$2,346,011	$2,434,177
Tier 1/Tier 2 UAL as a percentage of payroll	68%	108%
Tier 1/Tier 2 UAL rate	5.07%	8.65%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	28	32
Tier 1/Tier 2 dormant members	17	13
Tier 1/Tier 2 retirees and beneficiaries	40	38

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	2,346,011	2,434,177
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,556,909	$1,539,825
2. Employer reserves	4,554,978	3,878,220
3. Benefits in force reserve	4,452,003	4,141,427
4. Total market value of assets ***(1. + 2. + 3.)***	**$10,563,890**	**$9,559,472**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$9,559,472
2. Regular employer contributions	322,344
3. Benefit payments and expenses	(699,219)
4. Adjustments[2]	92,294
5. Interest credited	1,288,998
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$10,563,890**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	107,542	47,345
Tier 2 Police & Fire	0	0
Tier 2 General Service	92,436	99,615
Total	**$199,978**	**$146,960**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$135,769	$199,978	$64,209

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	2,545,497	3,007,403
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	1,312,985	1,077,737
▪ **Total Active Members**	**$3,858,482**	**$4,085,140**
Dormant Members	804,063	560,131
Retired Members and Beneficiaries	7,502,239	7,532,163
Total Actuarial Accrued Liability	**$12,164,784**	**$12,177,434**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$12,698,896	$12,164,784	($534,112)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$12,164,784	$12,177,434
2. Actuarial value of assets	10,563,890	9,559,472
3. Unfunded accrued liability *(1. – 2.)*	1,600,894	2,617,962
4. Funded percentage *(2. ÷ 1.)*	87%	79%
5. Combined valuation payroll	$2,346,011	$2,434,177
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	68%	108%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,600,894	$115,872
Total				**$1,600,894**	**$115,872**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$12,177,434
b. Normal cost at December 31, 2011	146,960
c. Benefit payments during 2012	(693,745)
d. Interest at 8.0% to December 31, 2012	958,202
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	12,588,851
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(534,112)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	12,054,739
2. Actuarial accrued liability at December 31, 2012	12,164,784
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(110,045)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	9,559,472
b. Contributions for 2012[1]	322,344
c. Benefit payments and expenses during 2012	(699,219)
d. Interest at 8.0% to December 31, 2012	749,683
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	9,932,280
5. Actuarial value of assets at December 31, 2012	10,563,890
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	631,610
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$521,565**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$2,617,962**
2. Expected increase	38,609
3. Liability (gain)/loss	110,045
4. Asset (gain)/loss	(631,610)
5. Change due to changes in assumptions, methods, and plan provisions	(534,112)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,600,894**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	107,542	711,548	15.11%	47,345	745,952	6.35%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	92,436	887,445	10.42%	99,615	983,739	10.13%
Total	**$199,978**	**$1,598,993**	**12.51%**	**$146,960**	**$1,729,691**	**8.50%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,600,894	$2,617,962
2. Next year's Tier 1/Tier 2 UAL payment	115,872	207,321
3. Combined valuation payroll	2,346,011	2,434,177
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.94%	8.52%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.51%	8.50%
b. Tier 1/Tier 2 UAL rate	4.94%	8.52%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.58%	17.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.65%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.65%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.93%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	87%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.65%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.65%
7. July 1, 2015 total pension rate, before adjustment	17.58%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.94%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.94%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.58%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.51%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.51%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.58%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.51%	8.50%
b. Tier 1/Tier 2 UAL rate	4.94%	8.52%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.58%	17.15%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$711,548	$0	$711,548
Tier 2	887,445	0	887,445
Tier 1/Tier 2 valuation payroll	1,598,993	0	1,598,993
OPSRP valuation payroll	747,018	0	747,018
Combined valuation payroll	**$2,346,011**	**$0**	**$2,346,011**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	12	16	15	43	13	19	15	47
Police & Fire	0	0	0	0	0	0	0	0
Total	12	16	15	43	13	19	15	47
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	6	8	N/A	14
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	0	N/A	1	6	8	N/A	14
Dormant Members								
General Service	4	13	2	19	5	8	2	15
Police & Fire	0	0	0	0	0	0	0	0
Total	4	13	2	19	5	8	2	15
Retired Members and Beneficiaries								
General Service	35	5	0	40	34	4	0	38
Police & Fire	0	0	0	0	0	0	0	0
Total	35	5	0	40	34	4	0	38
Grand Total Number of Members	**52**	**34**	**17**	**103**	**58**	**39**	**17**	**114**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			5							5
40-44		1	1	1						3
45-49		1	2							3
50-54		1	1	1						3
55-59			2	2	6					10
60-64		1	1		1	1				4
65-69										
70-74										
75+										
Total	0	4	12	4	7	1	0	0	0	28

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	2	4
35-39	1	820
40-44		
45-49	2	510
50-54	2	1,240
55-59	4	671
60-64	5	744
65-69	1	15
70-74		
75+		
Total	17	632

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49	1	1,182
50-54	1	1,340
55-59	3	804
60-64	13	1,963
65-69	13	851
70-74	6	1,461
75-79	2	1,234
80-84	1	3,377
85-89		
90-94		
95-99		
100+		
Total	40	1,403

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Rockwood Water PUD/2672
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Rockwood Water PUD/2672

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Rockwood Water PUD -- #2672

Secondary Employers

2554 Hazelwood Water District

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Rockwood Water PUD to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Rockwood Water PUD.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Rockwood Water PUD

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	10.48%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.14%	4.14%	4.14%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.22%**	**12.10%**	**16.20%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.78%**	**12.58%**	**16.68%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 80%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.62%	11.62%
Minimum July 1, 2015 Rate	8.62%	5.62%
Maximum July 1, 2015 Rate	14.62%	17.62%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$7,468,920	$7,344,445	($124,475)	102%	$1,225,709	(10%)
12/31/2008	5,852,445	7,877,547	2,025,102	74%	1,316,034	154%
12/31/2009	6,656,442	8,255,899	1,599,457	81%	1,424,777	112%
12/31/2010	7,086,107	8,405,996	1,319,889	84%	1,403,320	94%
12/31/2011	6,767,732	8,570,288	1,802,556	79%	1,285,852	140%
12/31/2012	7,031,202	8,782,146	1,750,944	80%	1,153,789	152%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Rockwood Water PUD

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,750,944	$1,802,556
Allocated pooled OPSRP UAL	81,322	21,940
Side account	0	0
Net unfunded pension actuarial accrued liability	1,832,266	1,824,496
Combined valuation payroll	1,153,789	1,285,852
Net pension UAL as a percentage of payroll	159%	142%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$24,207	$33,311

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$65,600	$80,009
Tier 1/Tier 2 valuation payroll	626,083	798,211
Tier 1/Tier 2 pension normal cost rate	10.48%	10.02%
Tier 1/ Tier 2 Actuarial accrued liability	$8,782,146	$8,570,288
Actuarial asset value	7,031,202	6,767,732
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,750,944	1,802,556
Tier 1/ Tier 2 Funded status	80%	79%
Combined valuation payroll	$1,153,789	$1,285,852
Tier 1/Tier 2 UAL as a percentage of payroll	152%	140%
Tier 1/Tier 2 UAL rate	4.14%	4.90%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	9	10
Tier 1/Tier 2 dormant members	8	8
Tier 1/Tier 2 retirees and beneficiaries	23	20

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,153,789	1,285,852
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,119,774	$1,305,311
2. Employer reserves	2,505,544	2,733,193
3. Benefits in force reserve	3,405,884	2,729,228
4. Total market value of assets *(1. + 2. + 3.)*	**$7,031,202**	**$6,767,732**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$6,767,732
2.	Regular employer contributions	103,341
3.	Benefit payments and expenses	(534,918)
4.	Adjustments[2]	(167,557)
5.	Interest credited	862,604
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$7,031,202**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	15,663	33,287
Tier 2 Police & Fire	0	0
Tier 2 General Service	49,937	46,722
Total	**$65,600**	**$80,009**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$56,496	$65,600	$9,104

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	1,075,142	1,600,507
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	873,560	571,883
▪ **Total Active Members**	**$1,948,702**	**$2,172,390**
Dormant Members	1,094,058	1,434,153
Retired Members and Beneficiaries	5,739,386	4,963,745
Total Actuarial Accrued Liability	**$8,782,146**	**$8,570,288**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$9,239,601	$8,782,146	($457,455)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$8,782,146	$8,570,288
2. Actuarial value of assets	7,031,202	6,767,732
3. Unfunded accrued liability *(1. – 2.)*	1,750,944	1,802,556
4. Funded percentage *(2. ÷ 1.)*	80%	79%
5. Combined valuation payroll	$1,153,789	$1,285,852
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	152%	140%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,750,944	$126,733
Total				**$1,750,944**	**$126,733**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$8,570,288
b. Normal cost at December 31, 2011	80,009
c. Benefit payments during 2012	(530,731)
d. Interest at 8.0% to December 31, 2012	670,795
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	8,790,361
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(457,455)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	8,332,906
2. Actuarial accrued liability at December 31, 2012	8,782,146
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(449,240)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	6,767,732
b. Contributions for 2012[1]	103,341
c. Benefit payments and expenses during 2012	(534,918)
d. Interest at 8.0% to December 31, 2012	524,155
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	6,860,310
5. Actuarial value of assets at December 31, 2012	7,031,202
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	170,892
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($278,348)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,802,556**
2. Expected increase	127,495
3. Liability (gain)/loss	449,240
4. Asset (gain)/loss	(170,892)
5. Change due to changes in assumptions, methods, and plan provisions	(457,455)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,750,944**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	15,663	81,489	19.22%	33,287	272,887	12.20%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	49,937	544,594	9.17%	46,722	525,324	8.89%
Total	**$65,600**	**$626,083**	**10.48%**	**$80,009**	**$798,211**	**10.02%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,750,944	$1,802,556
2. Next year's Tier 1/Tier 2 UAL payment	126,733	139,591
3. Combined valuation payroll	1,153,789	1,285,852
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	10.98%	10.86%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.48%	10.02%
b. Tier 1/Tier 2 UAL rate	10.98%	10.86%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	21.59%	21.01%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.62%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.62%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.32%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	80%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.62%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	14.62%
7. July 1, 2015 total pension rate, before adjustment	21.59%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(6.97%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	10.98%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.01%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.62%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	10.48%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	10.48%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.48%	10.02%
b. Tier 1/Tier 2 UAL rate	4.01%	4.77%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.62%	14.92%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$81,489	$0	$81,489
Tier 2	544,594	0	544,594
Tier 1/Tier 2 valuation payroll	626,083	0	626,083
OPSRP valuation payroll	527,706	0	527,706
Combined valuation payroll	**$1,153,789**	**$0**	**$1,153,789**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	7	9	18	3	7	9	19
Police & Fire	0	0	0	0	0	0	0	0
Total	2	7	9	18	3	7	9	19
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	4	2	N/A	6
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	0	N/A	1	4	2	N/A	6
Dormant Members								
General Service	7	1	0	8	6	2	0	8
Police & Fire	0	0	0	0	0	0	0	0
Total	7	1	0	8	6	2	0	8
Retired Members and Beneficiaries								
General Service	21	2	0	23	18	2	0	20
Police & Fire	0	0	0	0	0	0	0	0
Total	21	2	0	23	18	2	0	20
Grand Total Number of Members	**31**	**10**	**9**	**50**	**31**	**13**	**9**	**53**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							1
35-39			1							1
40-44		1	1	1						3
45-49			2							2
50-54										
55-59				2						2
60-64										
65-69										
70-74										
75+										
Total	0	1	5	3	0	0	0	0	0	9

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	3	1,928
50-54	2	1,085
55-59	2	1,689
60-64		
65-69	1	0
70-74		
75+		
Total	8	1,416

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	3	1,939
60-64	9	2,653
65-69	4	533
70-74	1	194
75-79	3	1,752
80-84	1	605
85-89		
90-94	1	1,982
95-99	1	34
100+		
Total	23	1,735

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Redmond Area Park & Recreation District/2689
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Redmond Area Park & Recreation District/2689

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Redmond Area Park & Recreation District -- #2689

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Redmond Area Park & Recreation District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Redmond Area Park & Recreation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Redmond Area Park & Recreation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.18%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.22%)	(2.22%)	(2.22%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.56%**	**5.74%**	**9.84%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**10.12%**	**6.22%**	**10.32%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 112%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.96%	5.96%
Minimum July 1, 2015 Rate	2.96%	0.00%
Maximum July 1, 2015 Rate	8.96%	11.96%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,190,252	$853,147	($337,105)	140%	$306,108	(110%)
12/31/2008	958,195	916,844	(41,351)	105%	260,448	(16%)
12/31/2009	1,072,442	981,667	(90,775)	109%	371,612	(24%)
12/31/2010	1,158,697	1,021,030	(137,667)	113%	522,965	(26%)
12/31/2011	1,131,545	1,064,956	(66,589)	106%	590,808	(11%)
12/31/2012	1,271,322	1,134,298	(137,024)	112%	766,663	(18%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Redmond Area Park & Recreation District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($137,024)	($66,589)
Allocated pooled OPSRP UAL	54,037	10,081
Side account	0	0
Net unfunded pension actuarial accrued liability	(82,987)	(56,508)
Combined valuation payroll	766,663	590,808
Net pension UAL as a percentage of payroll	(11%)	(10%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$16,085	$15,305

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$25,756	$22,598
Tier 1/Tier 2 valuation payroll	230,392	234,618
Tier 1/Tier 2 pension normal cost rate	11.18%	9.63%
Tier 1/ Tier 2 Actuarial accrued liability	$1,134,298	$1,064,956
Actuarial asset value	1,271,322	1,131,545
Tier 1/Tier 2 Unfunded actuarial accrued liability	(137,024)	(66,589)
Tier 1/ Tier 2 Funded status	112%	106%
Combined valuation payroll	$766,663	$590,808
Tier 1/Tier 2 UAL as a percentage of payroll	(18%)	(11%)
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(2.22%)	(1.17%)
Tier 1/Tier 2 active members [1]	6	6
Tier 1/Tier 2 dormant members	6	7
Tier 1/Tier 2 retirees and beneficiaries	8	8

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	766,663	590,808
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$279,713	$248,366
2. Employer reserves	776,084	672,679
3. Benefits in force reserve	215,525	210,501
4. Total market value of assets *(1. + 2. + 3.)*	**$1,271,322**	**$1,131,545**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,131,545
2. Regular employer contributions	6,804
3. Benefit payments and expenses	(33,850)
4. Adjustments[2]	18,831
5. Interest credited	147,992
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$1,271,322**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	12,276	8,677
Tier 2 Police & Fire	0	0
Tier 2 General Service	13,480	13,921
Total	**$25,756**	**$22,598**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$22,761	$25,756	$2,995

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	449,498	421,741
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	231,076	171,998
▪ **Total Active Members**	**$680,574**	**$593,739**
Dormant Members	90,535	88,371
Retired Members and Beneficiaries	363,189	382,846
Total Actuarial Accrued Liability	**$1,134,298**	**$1,064,956**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,130,736	$1,134,298	$3,562

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,134,298	$1,064,956
2. Actuarial value of assets	1,271,322	1,131,545
3. Unfunded accrued liability *(1. – 2.)*	(137,024)	(66,589)
4. Funded percentage *(2. ÷ 1.)*	112%	106%
5. Combined valuation payroll	$766,663	$590,808
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(18%)	(11%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($137,024)	($9,918)
Total				**($137,024)**	**($9,918)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,064,956
b. Normal cost at December 31, 2011	22,598
c. Benefit payments during 2012	(33,585)
d. Interest at 8.0% to December 31, 2012	85,661
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,139,630
f. Change in actuarial accrued liability due to assumption, method, and plan changes	3,562
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,143,192
2. Actuarial accrued liability at December 31, 2012	1,134,298
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	8,894
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,131,545
b. Contributions for 2012[1]	6,804
c. Benefit payments and expenses during 2012	(33,850)
d. Interest at 8.0% to December 31, 2012	89,442
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,193,941
5. Actuarial value of assets at December 31, 2012	1,271,322
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	77,381
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$86,275**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($66,589)**
2. Expected increase	12,278
3. Liability (gain)/loss	(8,894)
4. Asset (gain)/loss	(77,381)
5. Change due to changes in assumptions, methods, and plan provisions	3,562
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($137,024)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	12,276	94,295	13.02%	8,677	94,022	9.23%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	13,480	136,097	9.90%	13,921	140,596	9.90%
Total	**$25,756**	**$230,392**	**11.18%**	**$22,598**	**$234,618**	**9.63%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($137,024)	($66,589)
2. Next year's Tier 1/Tier 2 UAL payment	(9,918)	(7,692)
3. Combined valuation payroll	766,663	590,808
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(1.29%)	(1.30%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.18%	9.63%
b. Tier 1/Tier 2 UAL rate	(1.29%)	(1.30%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.02%	8.46%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.96%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.96%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.19%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	112%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.96%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.96%
7. July 1, 2015 total pension rate, before adjustment	10.02%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.06%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(1.29%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.35%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.96%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.18%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.18%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.18%	9.63%
b. Tier 1/Tier 2 UAL rate	(2.35%)	(1.30%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.96%	8.46%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$94,295	$0	$94,295
Tier 2	136,097	0	136,097
Tier 1/Tier 2 valuation payroll	230,392	0	230,392
OPSRP valuation payroll	536,271	0	536,271
Combined valuation payroll	**$766,663**	**$0**	**$766,663**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	4	31	37	2	4	27	33
Police & Fire	0	0	0	0	0	0	0	0
Total	2	4	31	37	2	4	27	33
Active Members with previous service segments with the employer								
General Service	7	2	N/A	9	7	2	N/A	9
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	7	2	N/A	9	7	2	N/A	9
Dormant Members								
General Service	2	4	0	6	2	5	0	7
Police & Fire	0	0	0	0	0	0	0	0
Total	2	4	0	6	2	5	0	7
Retired Members and Beneficiaries								
General Service	8	0	0	8	8	0	0	8
Police & Fire	0	0	0	0	0	0	0	0
Total	8	0	0	8	8	0	0	8
Grand Total Number of Members	**19**	**10**	**31**	**60**	**19**	**11**	**27**	**57**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39					1					1
40-44			2							2
45-49										
50-54			1							1
55-59			1							1
60-64				1						1
65-69										
70-74										
75+										
Total	0	0	4	1	1	0	0	0	0	6

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	2	57
40-44	1	79
45-49	1	1,006
50-54	1	244
55-59		
60-64		
65-69	1	809
70-74		
75+		
Total	6	375

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	4	428
65-69	1	270
70-74	1	306
75-79		
80-84		
85-89	2	196
90-94		
95-99		
100+		
Total	8	335

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Port of Umatilla/2581
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Port of Umatilla/2581

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Port of Umatilla/2581

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Umatilla -- #2581

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Umatilla to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Umatilla.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Port of Umatilla

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.37%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	2.59%	2.59%	2.59%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.56%**	**10.55%**	**14.65%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.12%**	**11.03%**	**15.13%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 91%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.96%	13.96%
Minimum July 1, 2015 Rate	10.96%	7.96%
Maximum July 1, 2015 Rate	16.96%	19.96%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,342,586	$1,258,201	($84,385)	107%	$185,888	(45%)
12/31/2008	1,048,691	1,336,803	288,112	78%	134,087	215%
12/31/2009	1,188,372	1,391,298	202,926	85%	138,238	147%
12/31/2010	1,286,852	1,460,214	173,362	88%	142,337	122%
12/31/2011	1,302,983	1,727,626	424,643	75%	209,068	203%
12/31/2012	1,466,216	1,609,488	143,272	91%	155,036	92%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Port of Umatilla

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$143,272	$424,643
Allocated pooled OPSRP UAL	10,927	3,567
Side account	0	0
Net unfunded pension actuarial accrued liability	154,199	428,210
Combined valuation payroll	155,036	209,068
Net pension UAL as a percentage of payroll	99%	205%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,253	$5,416

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$22,274	$28,289
Tier 1/Tier 2 valuation payroll	155,036	209,068
Tier 1/Tier 2 pension normal cost rate	14.37%	13.53%
Tier 1/ Tier 2 Actuarial accrued liability	$1,609,488	$1,727,626
Actuarial asset value	1,466,216	1,302,983
Tier 1/Tier 2 Unfunded actuarial accrued liability	143,272	424,643
Tier 1/ Tier 2 Funded status	91%	75%
Combined valuation payroll	$155,036	$209,068
Tier 1/Tier 2 UAL as a percentage of payroll	92%	203%
Tier 1/Tier 2 UAL rate	2.59%	4.83%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	4	4

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	155,036	209,068
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$364,881	$320,799
2. Employer reserves	729,053	618,110
3. Benefits in force reserve	372,282	364,074
4. Total market value of assets *(1. + 2. + 3.)*	**$1,466,216**	**$1,302,983**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,302,983
2. Regular employer contributions	19,520
3. Benefit payments and expenses	(58,470)
4. Adjustments[2]	36,843
5. Interest credited	165,339
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$1,466,216**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	22,274	28,289
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$22,274**	**$28,289**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$22,737	$22,274	($463)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	476,978	561,799
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$476,978**	**$561,799**
Dormant Members	505,163	503,673
Retired Members and Beneficiaries	627,347	662,154
Total Actuarial Accrued Liability	**$1,609,488**	**$1,727,626**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,694,333	$1,609,488	($84,845)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,609,488	$1,727,626
2. Actuarial value of assets	1,466,216	1,302,983
3. Unfunded accrued liability *(1. – 2.)*	143,272	424,643
4. Funded percentage *(2. ÷ 1.)*	91%	75%
5. Combined valuation payroll	$155,036	$209,068
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	92%	203%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$143,272	$10,370
Total				**$143,272**	**$10,370**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,727,626
b. Normal cost at December 31, 2011	28,289
c. Benefit payments during 2012	(58,012)
d. Interest at 8.0% to December 31, 2012	138,153
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,836,056
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(84,845)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,751,211
2. Actuarial accrued liability at December 31, 2012	1,609,488
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	141,723
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,302,983
b. Contributions for 2012[1]	19,520
c. Benefit payments and expenses during 2012	(58,470)
d. Interest at 8.0% to December 31, 2012	102,681
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,366,714
5. Actuarial value of assets at December 31, 2012	1,466,216
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	99,501
7. Total actuarial gain/(loss) *(3. + 6.)*	**$241,224**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$424,643**
2. Expected increase	44,698
3. Liability (gain)/loss	(141,723)
4. Asset (gain)/loss	(99,501)
5. Change due to changes in assumptions, methods, and plan provisions	(84,845)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$143,272**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	22,274	155,036	14.37%	28,289	209,068	13.53%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$22,274**	**$155,036**	**14.37%**	**$28,289**	**$209,068**	**13.53%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$143,272	$424,643
2. Next year's Tier 1/Tier 2 UAL payment	10,370	31,522
3. Combined valuation payroll	155,036	209,068
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.69%	15.08%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.37%	13.53%
b. Tier 1/Tier 2 UAL rate	6.69%	15.08%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	21.19%	28.74%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.96%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.96%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.79%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	91%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.96%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.96%
7. July 1, 2015 total pension rate, before adjustment	21.19%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.23%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.69%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.46%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.96%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.37%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.37%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.37%	13.53%
b. Tier 1/Tier 2 UAL rate	2.46%	4.70%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.96%	18.36%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$155,036	$0	$155,036
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	155,036	0	155,036
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$155,036**	**$0**	**$155,036**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Retired Members and Beneficiaries								
General Service	4	0	0	4	4	0	0	4
Police & Fire	0	0	0	0	0	0	0	0
Total	4	0	0	4	4	0	0	4
Grand Total Number of Members	**6**	**0**	**0**	**6**	**6**	**0**	**0**	**6**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64				1						1
65-69										
70-74										
75+										
Total	0	0	0	1	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	3,426
60-64		
65-69		
70-74		
75+		
Total	1	3,426

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	2,307
65-69	1	1,795
70-74		
75-79		
80-84	2	123
85-89		
90-94		
95-99		
100+		
Total	4	1,087

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Port of St Helens/2570
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Port of St Helens/2570

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Port of St Helens/2570

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA	Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary	Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of St Helens -- #2570

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Port of St Helens to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of St Helens.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Port of St Helens

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.73%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.87%)	(0.87%)	(0.87%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.46%**	**7.09%**	**11.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.02%**	**7.57%**	**11.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 106%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	7.86%	7.86%
Minimum July 1, 2015 Rate	4.86%	1.86%
Maximum July 1, 2015 Rate	10.86%	13.86%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,910,315	$1,644,033	($266,282)	116%	$584,600	(46%)
12/31/2008	1,437,598	1,786,853	349,255	80%	529,788	66%
12/31/2009	1,605,145	1,723,418	118,273	93%	482,355	25%
12/31/2010	1,687,521	1,734,253	46,732	97%	557,265	8%
12/31/2011	1,659,759	1,763,906	104,147	94%	703,056	15%
12/31/2012	1,808,628	1,712,608	(96,020)	106%	737,966	(13%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Port of St Helens

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($96,020)	$104,147
Allocated pooled OPSRP UAL	52,014	11,996
Side account	0	0
Net unfunded pension actuarial accrued liability	(44,006)	116,143
Combined valuation payroll	737,966	703,056
Net pension UAL as a percentage of payroll	(6%)	17%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$15,483	$18,213

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$21,584	$16,512
Tier 1/Tier 2 valuation payroll	183,972	176,118
Tier 1/Tier 2 pension normal cost rate	11.73%	9.38%
Tier 1/ Tier 2 Actuarial accrued liability	$1,712,608	$1,763,906
Actuarial asset value	1,808,628	1,659,759
Tier 1/Tier 2 Unfunded actuarial accrued liability	(96,020)	104,147
Tier 1/ Tier 2 Funded status	106%	94%
Combined valuation payroll	$737,966	$703,056
Tier 1/Tier 2 UAL as a percentage of payroll	(13%)	15%
Tier 1/Tier 2 UAL rate	(0.87%)	0.98%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	5	5
Tier 1/Tier 2 retirees and beneficiaries	6	7

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	737,966	703,056
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$151,539	$131,673
2. Employer reserves	971,332	829,661
3. Benefits in force reserve	685,757	698,425
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,808,628**	**$1,659,759**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,659,759
2. Regular employer contributions	20,348
3. Benefit payments and expenses	(107,703)
4. Adjustments[2]	10,281
5. Interest credited	225,944
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,808,628**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	12,610	8,201
Tier 2 Police & Fire	0	0
Tier 2 General Service	8,974	8,311
Total	**$21,584**	**$16,512**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$14,998	$21,584	$6,586

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	46,194	32,647
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	201,405	160,315
▪ **Total Active Members**	**$247,599**	**$192,962**
Dormant Members	309,413	300,694
Retired Members and Beneficiaries	1,155,596	1,270,250
Total Actuarial Accrued Liability	**$1,712,608**	**$1,763,906**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,780,779	$1,712,608	($68,171)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,712,608	$1,763,906
2. Actuarial value of assets	1,808,628	1,659,759
3. Unfunded accrued liability *(1. – 2.)*	(96,020)	104,147
4. Funded percentage *(2. ÷ 1.)*	106%	94%
5. Combined valuation payroll	$737,966	$703,056
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(13%)	15%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($96,020)	($6,950)
Total				**($96,020)**	**($6,950)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,763,906
b. Normal cost at December 31, 2011	16,512
c. Benefit payments during 2012	(106,860)
d. Interest at 8.0% to December 31, 2012	138,159
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,811,717
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(68,171)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,743,546
2. Actuarial accrued liability at December 31, 2012	1,712,608
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	30,938
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,659,759
b. Contributions for 2012[1]	20,348
c. Benefit payments and expenses during 2012	(107,703)
d. Interest at 8.0% to December 31, 2012	129,286
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,701,690
5. Actuarial value of assets at December 31, 2012	1,808,628
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	106,938
7. Total actuarial gain/(loss) *(3. + 6.)*	**$137,876**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$104,147**
2. Expected increase	5,880
3. Liability (gain)/loss	(30,938)
4. Asset (gain)/loss	(106,938)
5. Change due to changes in assumptions, methods, and plan provisions	(68,171)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**($96,020)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	12,610	83,189	15.16%	8,201	79,688	10.29%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	8,974	100,783	8.90%	8,311	96,430	8.62%
Total	**$21,584**	**$183,972**	**11.73%**	**$16,512**	**$176,118**	**9.38%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($96,020)	$104,147
2. Next year's Tier 1/Tier 2 UAL payment	(6,950)	5,961
3. Combined valuation payroll	737,966	703,056
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.94%)	0.85%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.73%	9.38%
b. Tier 1/Tier 2 UAL rate	(0.94%)	0.85%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.92%	10.36%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	7.86%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	7.86%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.57%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	106%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	4.86%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	10.86%
7. July 1, 2015 total pension rate, before adjustment	10.92%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.06%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(0.94%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.00%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	10.86%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.73%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.73%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.86%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.73%	9.38%
b. Tier 1/Tier 2 UAL rate	(1.00%)	0.85%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.86%	10.36%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$83,189	$0	$83,189
Tier 2	100,783	0	100,783
Tier 1/Tier 2 valuation payroll	183,972	0	183,972
OPSRP valuation payroll	553,994	0	553,994
Combined valuation payroll	**$737,966**	**$0**	**$737,966**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	1	9	11	1	1	9	11
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	9	11	1	1	9	11
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	1	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	1	N/A	1
Dormant Members								
General Service	2	3	0	5	2	3	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	2	3	0	5	2	3	0	5
Retired Members and Beneficiaries								
General Service	5	1	0	6	6	1	0	7
Police & Fire	0	0	0	0	0	0	0	0
Total	5	1	0	6	6	1	0	7
Grand Total Number of Members	**8**	**5**	**9**	**22**	**9**	**6**	**9**	**24**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44		1								**1**
45-49										
50-54						1				**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	2	723
55-59	3	502
60-64		
65-69		
70-74		
75+		
Total	5	590

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	5,451
65-69		
70-74	1	1,655
75-79		
80-84	2	440
85-89	2	677
90-94		
95-99		
100+		
Total	6	1,557

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Port of Hood River/2788
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Port of Hood River/2788

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA	Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary	Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Hood River -- #2788

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Hood River to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Hood River.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Port of Hood River

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.58%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.13%	0.13%	0.13%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.31%**	**8.09%**	**12.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.87%**	**8.57%**	**12.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 90%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,798,298	$1,366,266	($432,032)	132%	$768,190	(56%)
12/31/2008	1,428,983	1,568,804	139,821	91%	787,078	18%
12/31/2009	1,642,037	1,682,449	40,412	98%	825,736	5%
12/31/2010	1,847,219	1,892,645	45,426	98%	874,376	5%
12/31/2011	1,776,221	1,927,241	151,020	92%	898,223	17%
12/31/2012	2,009,040	2,223,288	214,248	90%	1,003,206	21%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Port of Hood River

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$214,248	$151,020
Allocated pooled OPSRP UAL	70,709	15,326
Side account	0	0
Net unfunded pension actuarial accrued liability	284,957	166,346
Combined valuation payroll	1,003,206	898,223
Net pension UAL as a percentage of payroll	28%	19%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$21,048	$23,269

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$82,780	$73,722
Tier 1/Tier 2 valuation payroll	714,605	720,932
Tier 1/Tier 2 pension normal cost rate	11.58%	10.23%
Tier 1/ Tier 2 Actuarial accrued liability	$2,223,288	$1,927,241
Actuarial asset value	2,009,040	1,776,221
Tier 1/Tier 2 Unfunded actuarial accrued liability	214,248	151,020
Tier 1/ Tier 2 Funded status	90%	92%
Combined valuation payroll	$1,003,206	$898,223
Tier 1/Tier 2 UAL as a percentage of payroll	21%	17%
Tier 1/Tier 2 UAL rate	0.13%	1.03%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	16	16
Tier 1/Tier 2 dormant members	5	6
Tier 1/Tier 2 retirees and beneficiaries	9	8

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,003,206	898,223
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$345,469	$347,115
2. Employer reserves	1,304,845	1,178,366
3. Benefits in force reserve	358,727	250,740
4. Total market value of assets *(1. + 2. + 3.)*	**$2,009,040**	**$1,776,221**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,776,221
2. Regular employer contributions	57,222
3. Benefit payments and expenses	(56,341)
4. Adjustments[2]	(17,129)
5. Interest credited	249,067
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$2,009,040**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	33,339	32,274
Tier 2 Police & Fire	0	0
Tier 2 General Service	49,441	41,448
Total	**$82,780**	**$73,722**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$74,939	$82,780	$7,841

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	827,806	775,190
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	638,931	570,143
▪ **Total Active Members**	**$1,466,737**	**$1,345,333**
Dormant Members	152,047	125,878
Retired Members and Beneficiaries	604,504	456,030
Total Actuarial Accrued Liability	**$2,223,288**	**$1,927,241**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$2,191,470	$2,223,288	$31,818

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$2,223,288	$1,927,241
2. Actuarial value of assets	2,009,040	1,776,221
3. Unfunded accrued liability *(1. – 2.)*	214,248	151,020
4. Funded percentage *(2. ÷ 1.)*	90%	92%
5. Combined valuation payroll	$1,003,206	$898,223
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	21%	17%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$214,248	$15,507
Total				**$214,248**	**$15,507**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,927,241
b. Normal cost at December 31, 2011	73,722
c. Benefit payments during 2012	(55,900)
d. Interest at 8.0% to December 31, 2012	157,841
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	2,102,904
f. Change in actuarial accrued liability due to assumption, method, and plan changes	31,818
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	2,134,722
2. Actuarial accrued liability at December 31, 2012	2,223,288
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(88,566)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,776,221
b. Contributions for 2012[1]	57,222
c. Benefit payments and expenses during 2012	(56,341)
d. Interest at 8.0% to December 31, 2012	142,133
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,919,236
5. Actuarial value of assets at December 31, 2012	2,009,040
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	89,805
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$1,239**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$151,020**
2. Expected increase	32,649
3. Liability (gain)/loss	88,566
4. Asset (gain)/loss	(89,805)
5. Change due to changes in assumptions, methods, and plan provisions	31,818
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$214,248**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	33,339	276,517	12.06%	32,274	322,813	10.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	49,441	438,088	11.29%	41,448	398,119	10.41%
Total	**$82,780**	**$714,605**	**11.58%**	**$73,722**	**$720,932**	**10.23%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$214,248	$151,020
2. Next year's Tier 1/Tier 2 UAL payment	15,507	8,097
3. Combined valuation payroll	1,003,206	898,223
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.55%	0.90%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.58%	10.23%
b. Tier 1/Tier 2 UAL rate	1.55%	0.90%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.26%	11.26%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	90%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	13.26%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.55%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.55%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.00%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.71%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.58%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.58%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.58%	10.23%
b. Tier 1/Tier 2 UAL rate	0.00%	0.90%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.71%	11.26%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$276,517	$0	$276,517
Tier 2	438,088	0	438,088
Tier 1/Tier 2 valuation payroll	714,605	0	714,605
OPSRP valuation payroll	288,601	0	288,601
Combined valuation payroll	**$1,003,206**	**$0**	**$1,003,206**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	5	11	9	25	5	11	7	23
Police & Fire	0	0	0	0	0	0	0	0
Total	5	11	9	25	5	11	7	23
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	1	1	N/A	2
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	1	1	N/A	2
Dormant Members								
General Service	2	3	0	5	3	3	0	6
Police & Fire	0	0	0	0	0	0	0	0
Total	2	3	0	5	3	3	0	6
Retired Members and Beneficiaries								
General Service	8	1	0	9	7	1	0	8
Police & Fire	0	0	0	0	0	0	0	0
Total	8	1	0	9	7	1	0	8
Grand Total Number of Members	**15**	**16**	**9**	**40**	**16**	**16**	**7**	**39**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39				1						1
40-44			1							1
45-49			2							2
50-54										
55-59		2	1	3	1					7
60-64		2	1							3
65-69										
70-74				1						1
75+			1							1
Total	0	4	6	5	1	0	0	0	0	16

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	2	801
55-59	1	25
60-64		
65-69	1	40
70-74		
75+	1	186
Total	5	371

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	730
60-64	2	488
65-69	2	472
70-74	2	335
75-79	1	210
80-84		
85-89		
90-94		
95-99		
100+		
Total	9	473

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Port of Cascade Locks/2633
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Port of Cascade Locks/2633

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Port of Cascade Locks/2633

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Cascade Locks -- #2633

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Cascade Locks to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Cascade Locks.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Port of Cascade Locks

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.21%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.46%)	(0.46%)	(0.46%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.35%**	**7.50%**	**11.60%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.91%**	**7.98%**	**12.08%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 101%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.75%	8.75%
Minimum July 1, 2015 Rate	5.75%	2.75%
Maximum July 1, 2015 Rate	11.75%	14.75%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$6,211,650	$5,250,789	($960,861)	118%	$513,469	(187%)
12/31/2008	4,678,329	5,108,992	430,663	92%	548,853	78%
12/31/2009	5,074,370	5,123,060	48,690	99%	547,818	9%
12/31/2010	5,420,488	5,350,182	(70,306)	101%	593,226	(12%)
12/31/2011	5,389,060	5,535,473	146,413	97%	627,202	23%
12/31/2012	5,740,612	5,705,510	(35,102)	101%	427,714	(8%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Port of Cascade Locks

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($35,102)	$146,413
Allocated pooled OPSRP UAL	30,146	10,702
Side account	0	0
Net unfunded pension actuarial accrued liability	(4,956)	157,115
Combined valuation payroll	427,714	627,202
Net pension UAL as a percentage of payroll	(1%)	25%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$8,974	$16,248

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$26,161	$45,654
Tier 1/Tier 2 valuation payroll	233,319	361,531
Tier 1/Tier 2 pension normal cost rate	11.21%	12.63%
Tier 1/ Tier 2 Actuarial accrued liability	$5,705,510	$5,535,473
Actuarial asset value	5,740,612	5,389,060
Tier 1/Tier 2 Unfunded actuarial accrued liability	(35,102)	146,413
Tier 1/ Tier 2 Funded status	101%	97%
Combined valuation payroll	$427,714	$627,202
Tier 1/Tier 2 UAL as a percentage of payroll	(8%)	23%
Tier 1/Tier 2 UAL rate	(0.46%)	(0.88%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	5	6
Tier 1/Tier 2 dormant members	16	16
Tier 1/Tier 2 retirees and beneficiaries	30	28

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	427,714	627,202
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$896,479	$1,089,892
2. Employer reserves	2,926,338	2,910,439
3. Benefits in force reserve	1,917,794	1,388,729
4. Total market value of assets ***(1. + 2. + 3.)***	**$5,740,612**	**$5,389,060**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$5,389,060
2.	Regular employer contributions	25,524
3.	Benefit payments and expenses	(301,203)
4.	Adjustments[2]	(84,667)
5.	Interest credited	711,898
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$5,740,612**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	26,161	45,654
Total	**$26,161**	**$45,654**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$29,044	$26,161	($2,883)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	289,638	1,076,511
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	401,092	494,958
▪ **Total Active Members**	**$690,730**	**$1,571,469**
Dormant Members	1,783,032	1,438,272
Retired Members and Beneficiaries	3,231,748	2,525,732
Total Actuarial Accrued Liability	**$5,705,510**	**$5,535,473**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$6,056,023	$5,705,510	($350,513)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$5,705,510	$5,535,473
2. Actuarial value of assets	5,740,612	5,389,060
3. Unfunded accrued liability *(1. – 2.)*	(35,102)	146,413
4. Funded percentage *(2. ÷ 1.)*	101%	97%
5. Combined valuation payroll	$427,714	$627,202
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(8%)	23%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($35,102)	($2,541)
Total				**($35,102)**	**($2,541)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$5,535,473
b. Normal cost at December 31, 2011	45,654
c. Benefit payments during 2012	(298,845)
d. Interest at 8.0% to December 31, 2012	434,536
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	5,716,818
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(350,513)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	5,366,305
2. Actuarial accrued liability at December 31, 2012	5,705,510
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(339,205)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	5,389,060
b. Contributions for 2012[1]	25,524
c. Benefit payments and expenses during 2012	(301,203)
d. Interest at 8.0% to December 31, 2012	420,098
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	5,533,479
5. Actuarial value of assets at December 31, 2012	5,740,612
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	207,133
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($132,072)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$146,413**
2. Expected increase	36,926
3. Liability (gain)/loss	339,205
4. Asset (gain)/loss	(207,133)
5. Change due to changes in assumptions, methods, and plan provisions	(350,513)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($35,102)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	26,161	233,319	11.21%	45,654	361,531	12.63%
Total	**$26,161**	**$233,319**	**11.21%**	**$45,654**	**$361,531**	**12.63%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($35,102)	$146,413
2. Next year's Tier 1/Tier 2 UAL payment	(2,541)	3,351
3. Combined valuation payroll	427,714	627,202
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.59%)	0.53%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.21%	12.63%
b. Tier 1/Tier 2 UAL rate	(0.59%)	0.53%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.75%	13.29%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.75%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.75%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.75%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	101%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.75%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.75%
7. July 1, 2015 total pension rate, before adjustment	10.75%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(0.59%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.59%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	10.75%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.21%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.21%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.75%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.21%	12.63%
b. Tier 1/Tier 2 UAL rate	(0.59%)	(1.01%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.75%	11.75%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	233,319	0	233,319
Tier 1/Tier 2 valuation payroll	233,319	0	233,319
OPSRP valuation payroll	194,395	0	194,395
Combined valuation payroll	**$427,714**	**$0**	**$427,714**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	5	6	11	0	6	7	13
Police & Fire	0	0	0	0	0	0	0	0
Total	0	5	6	11	0	6	7	13
Active Members with previous service segments with the employer								
General Service	1	1	N/A	2	3	2	N/A	5
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	1	N/A	2	3	2	N/A	5
Dormant Members								
General Service	12	4	0	16	12	4	0	16
Police & Fire	0	0	0	0	0	0	0	0
Total	12	4	0	16	12	4	0	16
Retired Members and Beneficiaries								
General Service	28	2	1	31	27	1	0	28
Police & Fire	0	0	0	0	0	0	0	0
Total	28	2	1	31	27	1	0	28
Grand Total Number of Members	**41**	**12**	**7**	**60**	**42**	**13**	**7**	**62**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54			2							2
55-59			2							2
60-64			1							1
65-69										
70-74										
75+										
Total	0	0	5	0	0	0	0	0	0	5

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	2	502
40-44		
45-49	4	2,478
50-54	1	1,625
55-59	2	1,251
60-64	3	1,427
65-69	2	105
70-74	2	1,171
75+		
Total	16	1,367

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	3	2,647
60-64	5	931
65-69	6	283
70-74	6	548
75-79	7	694
80-84	3	181
85-89		
90-94		
95-99		
100+		
Total	30	766

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Port of Astoria/2507
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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December 2013
Port of Astoria/2507

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Port of Astoria/2507

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Astoria -- #2507

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Astoria to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Astoria.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Port of Astoria

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.63%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.65%	0.65%	0.65%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.88%**	**8.61%**	**12.71%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.44%**	**9.09%**	**13.19%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 95%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.28%	10.28%
Minimum July 1, 2015 Rate	7.28%	4.28%
Maximum July 1, 2015 Rate	13.28%	16.28%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$5,391,549	$4,950,961	($440,588)	109%	$735,094	(60%)
12/31/2008	3,900,762	5,018,649	1,117,887	78%	812,180	138%
12/31/2009	4,374,426	5,245,303	870,877	83%	885,928	98%
12/31/2010	4,723,404	5,478,397	754,993	86%	1,217,796	62%
12/31/2011	4,672,295	5,646,482	974,187	83%	1,358,257	72%
12/31/2012	5,195,703	5,444,429	248,726	95%	1,487,753	17%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Port of Astoria

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$248,726	$974,187
Allocated pooled OPSRP UAL	104,861	23,175
Side account	0	0
Net unfunded pension actuarial accrued liability	353,587	997,362
Combined valuation payroll	1,487,753	1,358,257
Net pension UAL as a percentage of payroll	24%	73%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$31,214	$35,186

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$62,329	$36,935
Tier 1/Tier 2 valuation payroll	493,607	502,759
Tier 1/Tier 2 pension normal cost rate	12.63%	7.35%
Tier 1/ Tier 2 Actuarial accrued liability	$5,444,429	$5,646,482
Actuarial asset value	5,195,703	4,672,295
Tier 1/Tier 2 Unfunded actuarial accrued liability	248,726	974,187
Tier 1/ Tier 2 Funded status	95%	83%
Combined valuation payroll	$1,487,753	$1,358,257
Tier 1/Tier 2 UAL as a percentage of payroll	17%	72%
Tier 1/Tier 2 UAL rate	0.65%	5.43%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	8	8
Tier 1/Tier 2 dormant members	2	3
Tier 1/Tier 2 retirees and beneficiaries	30	26

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,487,753	1,358,257
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$680,761	$665,216
2. Employer reserves	2,330,418	2,031,453
3. Benefits in force reserve	2,184,524	1,975,626
4. Total market value of assets ***(1. + 2. + 3.)***	**$5,195,703**	**$4,672,295**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$4,672,295
2.	Regular employer contributions	126,347
3.	Benefit payments and expenses	(343,095)
4.	Adjustments [2]	107,935
5.	Interest credited	632,221
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$5,195,703**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	32,864	6,728
Tier 2 Police & Fire	0	0
Tier 2 General Service	29,465	30,207
Total	**$62,329**	**$36,935**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$37,290	$62,329	$25,039

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$9
▪ Tier 1 General Service	1,307,081	1,488,777
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	423,137	325,020
▪ **Total Active Members**	**$1,730,218**	**$1,813,806**
Dormant Members	32,987	239,533
Retired Members and Beneficiaries	3,681,224	3,593,143
Total Actuarial Accrued Liability	**$5,444,429**	**$5,646,482**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$5,743,208	$5,444,429	($298,779)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$5,444,429	$5,646,482
2. Actuarial value of assets	5,195,703	4,672,295
3. Unfunded accrued liability *(1. – 2.)*	248,726	974,187
4. Funded percentage *(2. ÷ 1.)*	95%	83%
5. Combined valuation payroll	$1,487,753	$1,358,257
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	17%	72%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$248,726	$18,003
Total				**$248,726**	**$18,003**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$5,646,482
b. Normal cost at December 31, 2011	36,935
c. Benefit payments during 2012	(340,409)
d. Interest at 8.0% to December 31, 2012	441,057
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	5,784,065
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(298,779)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	5,485,286
2. Actuarial accrued liability at December 31, 2012	5,444,429
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	40,857
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	4,672,295
b. Contributions for 2012[1]	126,347
c. Benefit payments and expenses during 2012	(343,095)
d. Interest at 8.0% to December 31, 2012	365,114
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	4,820,661
5. Actuarial value of assets at December 31, 2012	5,195,703
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	375,042
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$415,899**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$974,187**
2. Expected increase	(10,783)
3. Liability (gain)/loss	(40,857)
4. Asset (gain)/loss	(375,042)
5. Change due to changes in assumptions, methods, and plan provisions	(298,779)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$248,726**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	32,864	194,242	16.92%	6,728	203,284	3.31%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	29,465	299,365	9.84%	30,207	299,475	10.09%
Total	**$62,329**	**$493,607**	**12.63%**	**$36,935**	**$502,759**	**7.35%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$248,726	$974,187
2. Next year's Tier 1/Tier 2 UAL payment	18,003	72,047
3. Combined valuation payroll	1,487,753	1,358,257
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.21%	5.30%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.63%	7.35%
b. Tier 1/Tier 2 UAL rate	1.21%	5.30%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.97%	12.78%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.28%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.28%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.06%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	95%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.28%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.28%
7. July 1, 2015 total pension rate, before adjustment	13.97%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.69%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.21%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.52%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.28%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.63%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.63%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.63%	7.35%
b. Tier 1/Tier 2 UAL rate	0.52%	5.30%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.28%	12.78%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$194,242	$0	$194,242
Tier 2	299,365	0	299,365
Tier 1/Tier 2 valuation payroll	493,607	0	493,607
OPSRP valuation payroll	994,146	0	994,146
Combined valuation payroll	**$1,487,753**	**$0**	**$1,487,753**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	3	5	26	34	3	5	23	31
Police & Fire	0	0	0	0	0	0	0	0
Total	3	5	26	34	3	5	23	31
Active Members with previous service segments with the employer								
General Service	6	0	N/A	6	6	1	N/A	7
Police & Fire	0	0	N/A	0	1	0	N/A	1
Total	6	0	N/A	6	7	1	N/A	8
Dormant Members								
General Service	0	2	2	4	1	2	1	4
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	2	4	1	2	1	4
Retired Members and Beneficiaries								
General Service	23	5	0	28	21	4	0	25
Police & Fire	2	0	0	2	1	0	0	1
Total	25	5	0	30	22	4	0	26
Grand Total Number of Members	**34**	**12**	**28**	**74**	**33**	**12**	**24**	**69**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							1
40-44		1								1
45-49										
50-54			1							1
55-59						1				1
60-64		1	1		1					3
65-69				1						1
70-74										
75+										
Total	**0**	**2**	**3**	**1**	**1**	**1**	**0**	**0**	**0**	**8**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	359
55-59	1	564
60-64		
65-69		
70-74		
75+		
Total	2	462

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	3	1,254
60-64	9	538
65-69	7	679
70-74	4	2,070
75-79	3	771
80-84	1	2,508
85-89	2	873
90-94	1	919
95-99		
100+		
Total	30	971

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Polk Soil & Water Conservation District/2613
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Polk Soil & Water Conservation District/2613

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Polk Soil & Water Conservation District -- #2613

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Polk Soil & Water Conservation District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk Soil & Water Conservation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Polk Soil & Water Conservation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	8.93%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.05%	4.05%	4.05%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.58%**	**12.01%**	**16.11%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.14%**	**12.49%**	**16.59%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 73%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.51%	10.51%
Minimum July 1, 2015 Rate	7.51%	4.51%
Maximum July 1, 2015 Rate	13.51%	16.51%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$347,871	$295,001	($52,870)	118%	$145,992	(36%)
12/31/2008	300,593	316,733	16,140	95%	239,349	7%
12/31/2009	286,697	389,879	103,182	74%	296,506	35%
12/31/2010	295,692	404,871	109,179	73%	207,679	53%
12/31/2011	287,707	412,046	124,339	70%	188,085	66%
12/31/2012	322,307	440,320	118,013	73%	218,163	54%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Polk Soil & Water Conservation District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$118,013	$124,339
Allocated pooled OPSRP UAL	15,377	3,209
Side account	0	0
Net unfunded pension actuarial accrued liability	133,390	127,548
Combined valuation payroll	218,163	188,085
Net pension UAL as a percentage of payroll	61%	68%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$4,577	$4,872

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$6,698	$6,263
Tier 1/Tier 2 valuation payroll	74,995	66,339
Tier 1/Tier 2 pension normal cost rate	8.93%	9.44%
Tier 1/ Tier 2 Actuarial accrued liability	$440,320	$412,046
Actuarial asset value	322,307	287,707
Tier 1/Tier 2 Unfunded actuarial accrued liability	118,013	124,339
Tier 1/ Tier 2 Funded status	73%	70%
Combined valuation payroll	$218,163	$188,085
Tier 1/Tier 2 UAL as a percentage of payroll	54%	66%
Tier 1/Tier 2 UAL rate	4.05%	5.11%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	218,163	188,085
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$42,874	$37,562
2. Employer reserves	123,387	98,101
3. Benefits in force reserve	156,046	152,043
4. Total market value of assets ***(1. + 2. + 3.)***	**$322,307**	**$287,707**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$287,707
2.	Regular employer contributions	9,983
3.	Benefit payments and expenses	(24,508)
4.	Adjustments[2]	9,797
5.	Interest credited	39,329
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$322,307**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	6,698	6,263
Total	**$6,698**	**$6,263**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$7,488	$6,698	($790)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	42,734	53,800
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	131,194	78,562
▪ **Total Active Members**	**$173,928**	**$132,362**
Dormant Members	3,433	3,158
Retired Members and Beneficiaries	262,959	276,526
Total Actuarial Accrued Liability	**$440,320**	**$412,046**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$432,797	$440,320	$7,523

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$440,320	$412,046
2. Actuarial value of assets	322,307	287,707
3. Unfunded accrued liability *(1. – 2.)*	118,013	124,339
4. Funded percentage *(2. ÷ 1.)*	73%	70%
5. Combined valuation payroll	$218,163	$188,085
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	54%	66%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$118,013	$8,542
Total				**$118,013**	**$8,542**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$412,046
b. Normal cost at December 31, 2011	6,263
c. Benefit payments during 2012	(24,316)
d. Interest at 8.0% to December 31, 2012	32,492
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	426,485
f. Change in actuarial accrued liability due to assumption, method, and plan changes	7,523
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	434,008
2. Actuarial accrued liability at December 31, 2012	440,320
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(6,312)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	287,707
b. Contributions for 2012[1]	9,983
c. Benefit payments and expenses during 2012	(24,508)
d. Interest at 8.0% to December 31, 2012	22,436
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	295,617
5. Actuarial value of assets at December 31, 2012	322,307
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	26,690
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$20,378**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$124,339**
2. Expected increase	6,529
3. Liability (gain)/loss	6,312
4. Asset (gain)/loss	(26,690)
5. Change due to changes in assumptions, methods, and plan provisions	7,523
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$118,013**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	6,698	74,995	8.93%	6,263	66,339	9.44%
Total	**$6,698**	**$74,995**	**8.93%**	**$6,263**	**$66,339**	**9.44%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$118,013	$124,339
2. Next year's Tier 1/Tier 2 UAL payment	8,542	9,365
3. Combined valuation payroll	218,163	188,085
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.92%	4.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	8.93%	9.44%
b. Tier 1/Tier 2 UAL rate	3.92%	4.98%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	12.98%	14.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.51%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.51%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.10%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	73%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.51%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.51%
7. July 1, 2015 total pension rate, before adjustment	12.98%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	3.92%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.92%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.98%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	8.93%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	8.93%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	8.93%	9.44%
b. Tier 1/Tier 2 UAL rate	3.92%	4.98%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.98%	14.55%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	74,995	0	74,995
Tier 1/Tier 2 valuation payroll	74,995	0	74,995
OPSRP valuation payroll	143,168	0	143,168
Combined valuation payroll	**$218,163**	**$0**	**$218,163**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	5	6	0	1	5	6
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	5	6	0	1	5	6
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	1	N/A	2
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	1	1	N/A	2
Dormant Members								
General Service	0	2	1	3	0	2	1	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	1	3	0	2	1	3
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**1**	**3**	**6**	**10**	**2**	**4**	**6**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49			1							**1**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	138
40-44	1	8
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	2	73

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	2,020
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	2,020

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Polk County/2037
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Polk County/2037

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Polk County/2037

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Polk County -- #2037

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Polk County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Polk County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.91%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	2.08%	2.08%	2.08%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.59%**	**10.04%**	**14.14%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.15%**	**10.52%**	**14.62%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 84%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	12.99%	12.99%
Minimum July 1, 2015 Rate	9.99%	6.99%
Maximum July 1, 2015 Rate	15.99%	18.99%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$65,813,102	$64,658,271	($1,154,831)	102%	$12,774,059	(9%)
12/31/2008	49,132,014	66,614,193	17,482,179	74%	12,760,103	137%
12/31/2009	55,947,719	69,680,804	13,733,085	80%	13,126,561	105%
12/31/2010	59,956,853	72,381,493	12,424,640	83%	13,663,943	91%
12/31/2011	59,227,350	75,481,554	16,254,204	78%	14,950,846	109%
12/31/2012	64,520,822	76,733,759	12,212,937	84%	14,922,763	82%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Polk County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$12,212,937	$16,254,204
Allocated pooled OPSRP UAL	1,051,797	255,097
Side account	0	0
Net unfunded pension actuarial accrued liability	13,264,734	16,509,301
Combined valuation payroll	14,922,763	14,950,846
Net pension UAL as a percentage of payroll	89%	110%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$313,086	$387,309

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$1,171,314	$1,003,405
Tier 1/Tier 2 valuation payroll	8,423,087	8,836,151
Tier 1/Tier 2 pension normal cost rate	13.91%	11.36%
Tier 1/ Tier 2 Actuarial accrued liability	$76,733,759	$75,481,554
Actuarial asset value	64,520,822	59,227,350
Tier 1/Tier 2 Unfunded actuarial accrued liability	12,212,937	16,254,204
Tier 1/ Tier 2 Funded status	84%	78%
Combined valuation payroll	$14,922,763	$14,950,846
Tier 1/Tier 2 UAL as a percentage of payroll	82%	109%
Tier 1/Tier 2 UAL rate	2.08%	5.23%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	137	147
Tier 1/Tier 2 dormant members	107	102
Tier 1/Tier 2 retirees and beneficiaries	344	323

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	14,922,763	14,950,846
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$10,661,853	$10,513,568
2. Employer reserves	28,753,493	25,826,691
3. Benefits in force reserve	25,105,476	22,887,091
4. Total market value of assets ***(1. + 2. + 3.)***	**$64,520,822**	**$59,227,350**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$59,227,350
2. Regular employer contributions	1,277,983
3. Benefit payments and expenses	(3,942,993)
4. Adjustments[2]	106,546
5. Interest credited	7,851,936
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$64,520,822**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$173,856	$197,808
Tier 1 General Service	307,394	164,561
Tier 2 Police & Fire	342,471	299,583
Tier 2 General Service	347,593	341,453
Total	**$1,171,314**	**$1,003,405**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$1,018,526	$1,171,314	$152,788

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$4,190,921	$4,078,932
▪ Tier 1 General Service	13,031,307	16,030,707
▪ Tier 2 Police & Fire	4,989,813	3,589,306
▪ Tier 2 General Service	7,159,650	5,215,318
▪ **Total Active Members**	**$29,371,691**	**$28,914,263**
Dormant Members	5,055,875	4,941,710
Retired Members and Beneficiaries	42,306,193	41,625,581
Total Actuarial Accrued Liability	**$76,733,759**	**$75,481,554**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$78,809,513	$76,733,759	($2,075,754)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$76,733,759	$75,481,554
2. Actuarial value of assets	64,520,822	59,227,350
3. Unfunded accrued liability *(1. – 2.)*	12,212,937	16,254,204
4. Funded percentage *(2. ÷ 1.)*	84%	78%
5. Combined valuation payroll	$14,922,763	$14,950,846
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	82%	109%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$12,212,937	$883,971
Total				**$12,212,937**	**$883,971**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$75,481,554
b. Normal cost at December 31, 2011	1,003,405
c. Benefit payments during 2012	(3,912,128)
d. Interest at 8.0% to December 31, 2012	5,962,312
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	78,535,143
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(2,075,754)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	76,459,389
2. Actuarial accrued liability at December 31, 2012	76,733,759
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(274,370)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	59,227,350
b. Contributions for 2012[1]	1,277,983
c. Benefit payments and expenses during 2012	(3,942,993)
d. Interest at 8.0% to December 31, 2012	4,631,588
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	61,193,927
5. Actuarial value of assets at December 31, 2012	64,520,822
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	3,326,894
7. Total actuarial gain/(loss) *(3. + 6.)*	**$3,052,524**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$16,254,204**
2. Expected increase	1,087,011
3. Liability (gain)/loss	274,370
4. Asset (gain)/loss	(3,326,894)
5. Change due to changes in assumptions, methods, and plan provisions	(2,075,754)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$12,212,937**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$173,856	$912,552	19.05%	$197,808	$1,020,152	19.39%
Tier 1 General Service	307,394	2,072,380	14.83%	164,561	2,457,262	6.70%
Tier 2 Police & Fire	342,471	2,119,671	16.16%	299,583	1,975,797	15.16%
Tier 2 General Service	347,593	3,318,484	10.47%	341,453	3,382,940	10.09%
Total	**$1,171,314**	**$8,423,087**	**13.91%**	**$1,003,405**	**$8,836,151**	**11.36%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$12,212,937	$16,254,204
2. Next year's Tier 1/Tier 2 UAL payment	883,971	1,259,688
3. Combined valuation payroll	14,922,763	14,950,846
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.92%	8.43%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.91%	11.36%
b. Tier 1/Tier 2 UAL rate	5.92%	8.43%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.96%	19.92%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.99%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.99%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.60%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	84%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.99%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	15.99%
7. July 1, 2015 total pension rate, before adjustment	19.96%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.97%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	5.92%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.95%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	15.99%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.91%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.91%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.99%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.91%	11.36%
b. Tier 1/Tier 2 UAL rate	1.95%	5.10%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	15.99%	16.59%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$2,072,380	$912,552	$2,984,932
Tier 2	3,318,484	2,119,671	5,438,155
Tier 1/Tier 2 valuation payroll	5,390,864	3,032,223	8,423,087
OPSRP valuation payroll	5,761,321	738,355	6,499,676
Combined valuation payroll	**$11,152,185**	**$3,770,578**	**$14,922,763**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	33	60	121	214	42	63	112	217
Police & Fire	13	31	12	56	13	29	13	55
Total	46	91	133	270	55	92	125	272
Active Members with previous service segments with the employer								
General Service	50	26	N/A	76	99	57	N/A	156
Police & Fire	10	5	N/A	15	13	17	N/A	30
Total	60	31	N/A	91	112	74	N/A	186
Dormant Members								
General Service	53	46	8	107	48	44	2	94
Police & Fire	5	3	1	9	6	4	1	11
Total	58	49	9	116	54	48	3	105
Retired Members and Beneficiaries								
General Service	275	18	1	294	258	16	0	274
Police & Fire	49	2	0	51	48	1	0	49
Total	324	20	1	345	306	17	0	323
Grand Total Number of Members	**488**	**191**	**143**	**822**	**527**	**231**	**128**	**886**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		4	2							**6**
35-39		2	17							**19**
40-44		6	14	6						**26**
45-49		1	11	8	4	1				**25**
50-54		1	7	4	4	1				**17**
55-59		3	7	5	9	2				**26**
60-64		1	4	4	2		1			**12**
65-69		1	1	3				1		**6**
70-74										
75+										
Total	**0**	**19**	**63**	**30**	**19**	**4**	**1**	**1**	**0**	**137**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	4	438
35-39	12	565
40-44	16	566
45-49	11	857
50-54	16	651
55-59	22	656
60-64	20	365
65-69	4	295
70-74	1	244
75+	1	8
Total	107	566

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	3	39
45-49	3	1,425
50-54	3	988
55-59	23	955
60-64	69	1,133
65-69	86	970
70-74	60	872
75-79	40	1,101
80-84	33	647
85-89	18	682
90-94	5	383
95-99	1	760
100+		
Total	344	941

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Polk County Fire District #1/2688
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Polk County Fire District #1/2688

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Polk County Fire District #1/2688

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Polk County Fire District #1 -- #2688

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Polk County Fire District #1 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk County Fire District #1.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Polk County Fire District #1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.23%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	2.07%	2.07%	2.07%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.90%**	**10.03%**	**14.13%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.46%**	**10.51%**	**14.61%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 91%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.30%	14.30%
Minimum July 1, 2015 Rate	11.30%	8.30%
Maximum July 1, 2015 Rate	17.30%	20.30%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,802,629	$2,520,890	($281,739)	111%	$751,813	(37%)
12/31/2008	2,136,782	2,708,464	571,682	79%	977,015	59%
12/31/2009	2,498,792	2,879,399	380,607	87%	1,023,760	37%
12/31/2010	2,752,119	3,185,564	433,445	86%	1,099,325	39%
12/31/2011	2,877,755	3,340,925	463,170	86%	1,112,055	42%
12/31/2012	3,362,223	3,697,465	335,242	91%	1,132,943	30%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Polk County Fire District #1

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$335,242	$463,170
Allocated pooled OPSRP UAL	79,853	18,974
Side account	0	0
Net unfunded pension actuarial accrued liability	415,095	482,144
Combined valuation payroll	1,132,943	1,112,055
Net pension UAL as a percentage of payroll	37%	43%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$23,770	$28,808

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$100,685	$98,149
Tier 1/Tier 2 valuation payroll	660,907	720,641
Tier 1/Tier 2 pension normal cost rate	15.23%	13.62%
Tier 1/ Tier 2 Actuarial accrued liability	$3,697,465	$3,340,925
Actuarial asset value	3,362,223	2,877,755
Tier 1/Tier 2 Unfunded actuarial accrued liability	335,242	463,170
Tier 1/ Tier 2 Funded status	91%	86%
Combined valuation payroll	$1,132,943	$1,112,055
Tier 1/Tier 2 UAL as a percentage of payroll	30%	42%
Tier 1/Tier 2 UAL rate	2.07%	3.18%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	8	9
Tier 1/Tier 2 dormant members	6	6
Tier 1/Tier 2 retirees and beneficiaries	11	11

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,132,943	1,112,055
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$536,106	$464,779
2. Employer reserves	2,211,274	1,815,300
3. Benefits in force reserve	614,842	597,676
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,362,223**	**$2,877,755**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$2,877,755
2.	Regular employer contributions	120,458
3.	Benefit payments and expenses	(96,565)
4.	Adjustments[2]	54,300
5.	Interest credited	406,274
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,362,223**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$15,805	$19,447
Tier 1 General Service	0	0
Tier 2 Police & Fire	76,970	69,799
Tier 2 General Service	7,910	8,903
Total	**$100,685**	**$98,149**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$102,944	$100,685	($2,259)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$572,677	$1,150,202
▪ Tier 1 General Service	189,132	134,819
▪ Tier 2 Police & Fire	964,558	645,116
▪ Tier 2 General Service	170,044	151,709
▪ **Total Active Members**	**$1,896,411**	**$2,081,846**
Dormant Members	764,959	172,064
Retired Members and Beneficiaries	1,036,095	1,087,015
Total Actuarial Accrued Liability	**$3,697,465**	**$3,340,925**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$3,588,591	$3,697,465	$108,874

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,697,465	$3,340,925
2. Actuarial value of assets	3,362,223	2,877,755
3. Unfunded accrued liability *(1. – 2.)*	335,242	463,170
4. Funded percentage *(2. ÷ 1.)*	91%	86%
5. Combined valuation payroll	$1,132,943	$1,112,055
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	30%	42%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$335,242	$24,265
Total				**$335,242**	**$24,265**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$3,340,925
b. Normal cost at December 31, 2011	98,149
c. Benefit payments during 2012	(95,810)
d. Interest at 8.0% to December 31, 2012	271,294
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,614,558
f. Change in actuarial accrued liability due to assumption, method, and plan changes	108,874
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,723,432
2. Actuarial accrued liability at December 31, 2012	3,697,465
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	25,967
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,877,755
b. Contributions for 2012[1]	120,458
c. Benefit payments and expenses during 2012	(96,565)
d. Interest at 8.0% to December 31, 2012	231,176
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,132,824
5. Actuarial value of assets at December 31, 2012	3,362,223
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	229,398
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$255,365**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$463,170**
2. Expected increase	18,563
3. Liability (gain)/loss	(25,967)
4. Asset (gain)/loss	(229,398)
5. Change due to changes in assumptions, methods, and plan provisions	108,874
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$335,242**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$15,805	$98,681	16.02%	$19,447	$188,909	10.29%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	76,970	501,263	15.36%	69,799	471,423	14.81%
Tier 2 General Service	7,910	60,963	12.98%	8,903	60,309	14.76%
Total	**$100,685**	**$660,907**	**15.23%**	**$98,149**	**$720,641**	**13.62%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$335,242	$463,170
2. Next year's Tier 1/Tier 2 UAL payment	24,265	33,884
3. Combined valuation payroll	1,132,943	1,112,055
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.14%	3.05%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.23%	13.62%
b. Tier 1/Tier 2 UAL rate	2.14%	3.05%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.50%	16.80%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.30%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.30%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.86%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	91%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.30%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.30%
7. July 1, 2015 total pension rate, before adjustment	17.50%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.20%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.14%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.94%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.30%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.23%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.23%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.30%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.23%	13.62%
b. Tier 1/Tier 2 UAL rate	1.94%	3.05%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.30%	16.80%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$98,681	$98,681
Tier 2	60,963	501,263	562,226
Tier 1/Tier 2 valuation payroll	60,963	599,944	660,907
OPSRP valuation payroll	31,502	440,534	472,036
Combined valuation payroll	**$92,465**	**$1,040,478**	**$1,132,943**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	1	2	0	1	1	2
Police & Fire	1	6	6	13	2	6	5	13
Total	1	7	7	15	2	7	6	15
Active Members with previous service segments with the employer								
General Service	2	1	N/A	3	6	3	N/A	9
Police & Fire	4	2	N/A	6	5	3	N/A	8
Total	6	3	N/A	9	11	6	N/A	17
Dormant Members								
General Service	0	0	0	0	1	0	0	1
Police & Fire	5	1	0	6	4	1	0	5
Total	5	1	0	6	5	1	0	6
Retired Members and Beneficiaries								
General Service	3	1	0	4	4	0	0	4
Police & Fire	7	0	0	7	7	0	0	7
Total	10	1	0	11	11	0	0	11
Grand Total Number of Members	**22**	**12**	**7**	**41**	**29**	**14**	**6**	**49**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			2							**2**
40-44		1	1	2						**4**
45-49										
50-54			1							**1**
55-59										
60-64		1								**1**
65-69										
70-74										
75+										
Total	**0**	**2**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**8**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	2	398
45-49		
50-54	1	41
55-59	3	1,685
60-64		
65-69		
70-74		
75+		
Total	6	982

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	101
60-64	6	728
65-69	3	698
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	11	606

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Owyhee Irrigation District/2533
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Owyhee Irrigation District/2533

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Owyhee Irrigation District/2533

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Owyhee Irrigation District -- #2533

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Owyhee Irrigation District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Owyhee Irrigation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Owyhee Irrigation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.55%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	13.22%	13.22%	13.22%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**27.37%**	**21.18%**	**25.28%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**27.93%**	**21.66%**	**25.76%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 74%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	23.77%	23.77%
Minimum July 1, 2015 Rate	19.02%	14.27%
Maximum July 1, 2015 Rate	28.52%	33.27%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$6,866,295	$8,832,458	$1,966,163	78%	$1,139,851	172%
12/31/2008	4,902,840	8,464,726	3,561,886	58%	1,128,948	316%
12/31/2009	5,363,864	8,428,446	3,064,582	64%	1,172,351	261%
12/31/2010	5,822,565	8,742,967	2,920,402	67%	1,218,051	240%
12/31/2011	5,806,866	8,836,456	3,029,590	66%	1,230,438	246%
12/31/2012	6,153,054	8,361,630	2,208,576	74%	1,221,590	181%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Owyhee Irrigation District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$2,208,576	$3,029,590
Allocated pooled OPSRP UAL	86,101	20,994
Side account	0	0
Net unfunded pension actuarial accrued liability	2,294,677	3,050,584
Combined valuation payroll	1,221,590	1,230,438
Net pension UAL as a percentage of payroll	188%	248%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$25,629	$31,875

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$113,171	$52,797
Tier 1/Tier 2 valuation payroll	835,113	923,528
Tier 1/Tier 2 pension normal cost rate	13.55%	5.72%
Tier 1/ Tier 2 Actuarial accrued liability	$8,361,630	$8,836,456
Actuarial asset value	6,153,054	5,806,866
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,208,576	3,029,590
Tier 1/ Tier 2 Funded status	74%	66%
Combined valuation payroll	$1,221,590	$1,230,438
Tier 1/Tier 2 UAL as a percentage of payroll	181%	246%
Tier 1/Tier 2 UAL rate	13.22%	20.55%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	17	21
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	27	27

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,221,590	1,230,438
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$970,910	$1,184,616
2. Employer reserves	1,807,290	1,682,980
3. Benefits in force reserve	3,374,854	2,939,270
4. Total market value of assets *(1. + 2. + 3.)*	**$6,153,054**	**$5,806,866**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$5,806,866
2.	Regular employer contributions	312,527
3.	Benefit payments and expenses	(530,045)
4.	Adjustments[2]	(233,708)
5.	Interest credited	797,413
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$6,153,054**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	85,374	22,122
Tier 2 Police & Fire	0	0
Tier 2 General Service	27,797	30,675
Total	**$113,171**	**$52,797**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$61,772	$113,171	$51,399

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	2,256,278	3,125,791
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	418,257	364,909
▪ **Total Active Members**	**$2,674,535**	**$3,490,700**
Dormant Members	0	0
Retired Members and Beneficiaries	5,687,095	5,345,756
Total Actuarial Accrued Liability	**$8,361,630**	**$8,836,456**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$8,904,560	$8,361,630	($542,930)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$8,361,630	$8,836,456
2. Actuarial value of assets	6,153,054	5,806,866
3. Unfunded accrued liability *(1. – 2.)*	2,208,576	3,029,590
4. Funded percentage *(2. ÷ 1.)*	74%	66%
5. Combined valuation payroll	$1,221,590	$1,230,438
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	181%	246%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$2,208,576	$159,856
Total				**$2,208,576**	**$159,856**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$8,836,456
b. Normal cost at December 31, 2011	52,797
c. Benefit payments during 2012	(525,896)
d. Interest at 8.0% to December 31, 2012	690,104
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	9,053,461
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(542,930)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	8,510,531
2. Actuarial accrued liability at December 31, 2012	8,361,630
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	148,901
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	5,806,866
b. Contributions for 2012[1]	312,527
c. Benefit payments and expenses during 2012	(530,045)
d. Interest at 8.0% to December 31, 2012	455,849
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	6,045,198
5. Actuarial value of assets at December 31, 2012	6,153,054
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	107,856
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$256,757**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$3,029,590**
2. Expected increase	(21,327)
3. Liability (gain)/loss	(148,901)
4. Asset (gain)/loss	(107,856)
5. Change due to changes in assumptions, methods, and plan provisions	(542,930)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$2,208,576**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	85,374	587,431	14.53%	22,122	653,586	3.38%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	27,797	247,682	11.22%	30,675	269,942	11.36%
Total	**$113,171**	**$835,113**	**13.55%**	**$52,797**	**$923,528**	**5.72%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$2,208,576	$3,029,590
2. Next year's Tier 1/Tier 2 UAL payment	159,856	251,303
3. Combined valuation payroll	1,221,590	1,230,438
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	13.09%	20.42%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.55%	5.72%
b. Tier 1/Tier 2 UAL rate	13.09%	20.42%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	26.77%	26.27%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	23.77%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	23.77%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	4.75%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	4.75%
c. Funded percentage	74%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	4.75%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	19.02%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	28.52%
7. July 1, 2015 total pension rate, before adjustment	26.77%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	13.09%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	13.09%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	26.77%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.55%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.55%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	26.77%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.55%	5.72%
b. Tier 1/Tier 2 UAL rate	13.09%	20.42%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	26.77%	26.27%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$587,431	$0	$587,431
Tier 2	247,682	0	247,682
Tier 1/Tier 2 valuation payroll	835,113	0	835,113
OPSRP valuation payroll	386,477	0	386,477
Combined valuation payroll	**$1,221,590**	**$0**	**$1,221,590**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	12	5	11	28	15	6	9	30
Police & Fire	0	0	0	0	0	0	0	0
Total	12	5	11	28	15	6	9	30
Active Members with previous service segments with the employer								
General Service	3	1	N/A	4	3	1	N/A	4
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	3	1	N/A	4	3	1	N/A	4
Dormant Members								
General Service	0	0	1	1	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0
Retired Members and Beneficiaries								
General Service	26	1	1	28	27	0	1	28
Police & Fire	0	0	0	0	0	0	0	0
Total	26	1	1	28	27	0	1	28
Grand Total Number of Members	**41**	**7**	**13**	**61**	**45**	**7**	**10**	**62**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							**1**
45-49										
50-54			1	1	3	1				**6**
55-59			2	2	1	1				**6**
60-64					2					**2**
65-69		1					1			**2**
70-74										
75+										
Total	**0**	**1**	**4**	**3**	**6**	**2**	**1**	**0**	**0**	**17**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members			Retired Members and Beneficiaries		
Age	**Count**	**Average Deferred Monthly Benefit**	**Age**	**Count**	**Average Monthly Benefit**
<20			**<45**		
20-24			**45-49**		
25-29			**50-54**	1	2,633
30-34			**55-59**	1	1,756
35-39			**60-64**	2	2,946
40-44			**65-69**	6	1,905
45-49			**70-74**	7	1,676
50-54			**75-79**	3	779
55-59			**80-84**	4	1,419
60-64			**85-89**	3	691
65-69			**90-94**		
70-74			**95-99**		
75+			**100+**		
Total			**Total**	27	1,612

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Oregon Municipal Electric Utilities Association/2876
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Oregon Municipal Electric Utilities Association/2876

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Oregon Municipal Electric Utilities Association -- #2876

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Oregon Municipal Electric Utilities Association to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oregon Municipal Electric Utilities Association.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Oregon Municipal Electric Utilities Association

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	9.93%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.11%	0.11%	0.11%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**10.64%**	**8.07%**	**12.17%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.20%**	**8.55%**	**12.65%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 105%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.04%	10.04%
Minimum July 1, 2015 Rate	7.04%	4.04%
Maximum July 1, 2015 Rate	13.04%	16.04%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$0	0%
12/31/2008	0	0	0	0%	0	0%
12/31/2009	0	0	0	0%	0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	5,029	4,809	(220)	105%	92,028	0%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.56%	0.48%	0.48%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Oregon Municipal Electric Utilities Association

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($220)	$0
Allocated pooled OPSRP UAL	6,486	0
Side account	0	0
Net unfunded pension actuarial accrued liability	6,266	0
Combined valuation payroll	92,028	0
Net pension UAL as a percentage of payroll	7%	0%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,931	$0

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$9,141	$0
Tier 1/Tier 2 valuation payroll	92,028	0
Tier 1/Tier 2 pension normal cost rate	9.93%	0.00%
Tier 1/ Tier 2 Actuarial accrued liability	$4,809	$0
Actuarial asset value	5,029	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	(220)	0
Tier 1/ Tier 2 Funded status	105%	0%
Combined valuation payroll	$92,028	$0
Tier 1/Tier 2 UAL as a percentage of payroll	0%	0%
Tier 1/Tier 2 UAL rate	0.11%	0.00%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	92,028	0
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	5,029	0
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$5,029**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$0
2. Regular employer contributions	4,446
3. Benefit payments and expenses	0
4. Adjustments [2]	(56)
5. Interest credited	639
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$5,029**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	9,141	0
Total	**$9,141**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$8,950	$9,141	$191

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	4,809	0
▪ **Total Active Members**	**$4,809**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$4,809**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$3,454	$4,809	$1,355

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$4,809	$0
2. Actuarial value of assets	5,029	0
3. Unfunded accrued liability *(1. – 2.)*	(220)	0
4. Funded percentage *(2. ÷ 1.)*	105%	0%
5. Combined valuation payroll	$92,028	$0
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	0%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($220)	($16)
Total				**($220)**	**($16)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$0
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	1,355
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,355
2. Actuarial accrued liability at December 31, 2012	4,809
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(3,454)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	0
b. Contributions for 2012[1]	4,446
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	178
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	4,624
5. Actuarial value of assets at December 31, 2012	5,029
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	405
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($3,049)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$0**
2. Expected increase	0
3. Liability (gain)/loss	3,454
4. Asset (gain)/loss	(405)
5. Change due to changes in assumptions, methods, and plan provisions	1,355
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($220)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	9,141	92,028	9.93%	0	0	0.00%
Total	**$9,141**	**$92,028**	**9.93%**	**$0**	**$0**	**0.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($220)	$0
2. Next year's Tier 1/Tier 2 UAL payment	(16)	0
3. Combined valuation payroll	92,028	0
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.02%)	0.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.93%	N/A
b. Tier 1/Tier 2 UAL rate	(0.02%)	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.04%	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.04%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.04%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.93%	N/A
b. Tier 1/Tier 2 UAL rate	(0.02%)	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.04%	N/A

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	92,028	0	92,028
Tier 1/Tier 2 valuation payroll	92,028	0	92,028
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$92,028**	**$0**	**$92,028**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49			1							1
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	1	0	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Oregon Community College Association/2685
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Oregon Community College Association/2685

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Oregon Community College Association/2685

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Oregon Community College Association -- #2685

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Oregon Community College Association to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oregon Community College Association.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Oregon Community College Association

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	10.46%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(5.02%)	(5.02%)	(5.02%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**2.94%**	**7.04%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**3.42%**	**7.52%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 121%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,531,782	$1,330,036	($201,746)	115%	$305,146	(66%)
12/31/2008	1,231,401	1,345,363	113,962	92%	345,098	33%
12/31/2009	1,319,113	1,244,519	(74,594)	106%	333,806	(22%)
12/31/2010	1,448,455	1,302,346	(146,109)	111%	351,534	(42%)
12/31/2011	1,413,315	1,307,049	(106,266)	108%	361,227	(29%)
12/31/2012	1,581,197	1,310,878	(270,319)	121%	379,961	(71%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Oregon Community College Association

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($270,319)	($106,266)
Allocated pooled OPSRP UAL	26,781	6,163
Side account	0	0
Net unfunded pension actuarial accrued liability	(243,538)	(100,103)
Combined valuation payroll	379,961	361,227
Net pension UAL as a percentage of payroll	(64%)	(28%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$7,972	$9,358

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$17,607	$14,315
Tier 1/Tier 2 valuation payroll	180,393	175,312
Tier 1/Tier 2 pension normal cost rate	10.46%	8.17%
Tier 1/ Tier 2 Actuarial accrued liability	$1,310,878	$1,307,049
Actuarial asset value	1,581,197	1,413,315
Tier 1/Tier 2 Unfunded actuarial accrued liability	(270,319)	(106,266)
Tier 1/ Tier 2 Funded status	121%	108%
Combined valuation payroll	$379,961	$361,227
Tier 1/Tier 2 UAL as a percentage of payroll	(71%)	(29%)
Tier 1/Tier 2 UAL rate	(5.02%)	(2.57%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	379,961	361,227
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$254,816	$221,284
2. Employer reserves	968,639	842,126
3. Benefits in force reserve	357,742	349,905
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,581,197**	**$1,413,315**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,413,315
2. Regular employer contributions	5,241
3. Benefit payments and expenses	(56,186)
4. Adjustments [2]	26,703
5. Interest credited	192,123
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,581,197**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	17,607	14,315
Total	**$17,607**	**$14,315**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$15,357	$17,607	$2,250

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	251,018	313,976
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	396,652	298,995
▪ **Total Active Members**	**$647,670**	**$612,971**
Dormant Members	60,363	57,693
Retired Members and Beneficiaries	602,845	636,385
Total Actuarial Accrued Liability	**$1,310,878**	**$1,307,049**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,373,575	$1,310,878	($62,697)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,310,878	$1,307,049
2. Actuarial value of assets	1,581,197	1,413,315
3. Unfunded accrued liability *(1. – 2.)*	(270,319)	(106,266)
4. Funded percentage *(2. ÷ 1.)*	121%	108%
5. Combined valuation payroll	$379,961	$361,227
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(71%)	(29%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($270,319)	($19,566)
Total				**($270,319)**	**($19,566)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,307,049
b. Normal cost at December 31, 2011	14,315
c. Benefit payments during 2012	(55,746)
d. Interest at 8.0% to December 31, 2012	103,479
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,369,097
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(62,697)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,306,400
2. Actuarial accrued liability at December 31, 2012	1,310,878
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(4,478)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,413,315
b. Contributions for 2012[1]	5,241
c. Benefit payments and expenses during 2012	(56,186)
d. Interest at 8.0% to December 31, 2012	111,027
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,473,398
5. Actuarial value of assets at December 31, 2012	1,581,197
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	107,799
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$103,321**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($106,266)**
2. Expected increase	1,965
3. Liability (gain)/loss	4,478
4. Asset (gain)/loss	(107,799)
5. Change due to changes in assumptions, methods, and plan provisions	(62,697)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($270,319)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	17,607	180,393	9.76%	14,315	175,312	8.17%
Total	**$17,607**	**$180,393**	**9.76%**	**$14,315**	**$175,312**	**8.17%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($270,319)	($106,266)
2. Next year's Tier 1/Tier 2 UAL payment	(19,566)	(9,752)
3. Combined valuation payroll	379,961	361,227
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(5.15%)	(2.70%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.76%	8.17%
b. Tier 1/Tier 2 UAL rate	(5.15%)	(2.70%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	4.74%	5.60%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	121%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	4.74%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(5.15%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.15%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	4.74%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.70%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	9.76%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	10.46%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.46%	8.17%
b. Tier 1/Tier 2 UAL rate	(5.15%)	(2.70%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.60%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	180,393	0	180,393
Tier 1/Tier 2 valuation payroll	180,393	0	180,393
OPSRP valuation payroll	199,568	0	199,568
Combined valuation payroll	**$379,961**	**$0**	**$379,961**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	2	4	6	0	2	3	5
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	4	6	0	2	3	5
Active Members with previous service segments with the employer								
General Service	2	1	N/A	3	4	3	N/A	7
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	2	1	N/A	3	4	3	N/A	7
Dormant Members								
General Service	1	1	0	2	1	1	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	0	2	1	1	0	2
Retired Members and Beneficiaries								
General Service	5	0	0	5	5	0	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**8**	**4**	**4**	**16**	**10**	**6**	**3**	**19**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49			1	1						**2**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	676
50-54	1	318
55-59		
60-64		
65-69		
70-74		
75+		
Total	2	497

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	659
60-64	1	1,839
65-69	1	560
70-74	1	994
75-79		
80-84	1	517
85-89		
90-94		
95-99		
100+		
Total	5	914

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Oregon Coastal Zone Management Association/2723
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Oregon Coastal Zone Management Association/2723

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Oregon Coastal Zone Management Association -- #2723

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Oregon Coastal Zone Management Association to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oregon Coastal Zone Management Association.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Oregon Coastal Zone Management Association

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	25.28%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(16.87%)	(16.87%)	(16.87%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**0.48%**	**0.48%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 118%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$647,922	$518,451	($129,471)	125%	$104,599	(124%)
12/31/2008	547,195	539,460	(7,735)	101%	106,454	(7%)
12/31/2009	638,934	540,211	(98,723)	118%	111,777	(88%)
12/31/2010	646,619	605,147	(41,472)	107%	119,668	(35%)
12/31/2011	660,842	645,831	(15,011)	102%	124,205	(12%)
12/31/2012	748,625	636,567	(112,058)	118%	53,574	(209%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Oregon Coastal Zone Management Association

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($112,058)	($15,011)
Allocated pooled OPSRP UAL	3,776	2,119
Side account	0	0
Net unfunded pension actuarial accrued liability	(108,282)	(12,892)
Combined valuation payroll	53,574	124,205
Net pension UAL as a percentage of payroll	(202%)	(10%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,124	$3,218

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$13,542	$8,857
Tier 1/Tier 2 valuation payroll	53,574	124,205
Tier 1/Tier 2 pension normal cost rate	25.28%	7.44%
Tier 1/ Tier 2 Actuarial accrued liability	$636,567	$645,831
Actuarial asset value	748,625	660,842
Tier 1/Tier 2 Unfunded actuarial accrued liability	(112,058)	(15,011)
Tier 1/ Tier 2 Funded status	118%	102%
Combined valuation payroll	$53,574	$124,205
Tier 1/Tier 2 UAL as a percentage of payroll	(209%)	(12%)
Tier 1/Tier 2 UAL rate	(16.87%)	(2.03%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	2
Tier 1/Tier 2 dormant members	1	0
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	53,574	124,205
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$195,214	$171,251
2. Employer reserves	452,483	391,716
3. Benefits in force reserve	100,928	97,875
4. Total market value of assets *(1. + 2. + 3.)*	**$748,625**	**$660,842**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$660,842
2. Regular employer contributions	4,007
3. Benefit payments and expenses	(15,851)
4. Adjustments [2]	13,189
5. Interest credited	86,438
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$748,625**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	13,542	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	8,857
Total	**$13,542**	**$8,857**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$13,542	$13,542

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	307,510	322,941
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	144,881
▪ **Total Active Members**	**$307,510**	**$467,822**
Dormant Members	158,979	0
Retired Members and Beneficiaries	170,078	178,009
Total Actuarial Accrued Liability	**$636,567**	**$645,831**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$692,110	$636,567	($55,543)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$636,567	$645,831
2. Actuarial value of assets	748,625	660,842
3. Unfunded accrued liability *(1. – 2.)*	(112,058)	(15,011)
4. Funded percentage *(2. ÷ 1.)*	118%	102%
5. Combined valuation payroll	$53,574	$124,205
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(209%)	(12%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($112,058)	($8,111)
Total				**($112,058)**	**($8,111)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$645,831
b. Normal cost at December 31, 2011	8,857
c. Benefit payments during 2012	(15,727)
d. Interest at 8.0% to December 31, 2012	51,746
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	690,707
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(55,543)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	635,164
2. Actuarial accrued liability at December 31, 2012	636,567
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,403)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	660,842
b. Contributions for 2012[1]	4,007
c. Benefit payments and expenses during 2012	(15,851)
d. Interest at 8.0% to December 31, 2012	52,394
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	701,391
5. Actuarial value of assets at December 31, 2012	748,625
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	47,234
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$45,831**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($15,011)**
2. Expected increase	4,327
3. Liability (gain)/loss	1,403
4. Asset (gain)/loss	(47,234)
5. Change due to changes in assumptions, methods, and plan provisions	(55,543)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($112,058)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	13,542	53,574	25.28%	0	53,584	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	8,857	70,621	12.54%
Total	**$13,542**	**$53,574**	**25.28%**	**$8,857**	**$124,205**	**7.13%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($112,058)	($15,011)
2. Next year's Tier 1/Tier 2 UAL payment	(8,111)	(2,689)
3. Combined valuation payroll	53,574	124,205
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(15.14%)	(2.16%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	25.28%	7.13%
b. Tier 1/Tier 2 UAL rate	(15.14%)	(2.16%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.27%	5.10%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	118%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	10.27%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.86%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(15.14%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(17.00%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	25.28%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	25.28%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	25.28%	7.44%
b. Tier 1/Tier 2 UAL rate	(17.00%)	(2.16%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate	8.41%	5.41%
(a. + b. + c., minimum of 5.44%)		

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$53,574	$0	$53,574
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	53,574	0	53,574
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$53,574**	**$0**	**$53,574**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	0	1	1	1	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	1	0	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	1	0	1	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**2**	**1**	**0**	**3**	**2**	**1**	**0**	**3**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69					1					**1**
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	1,373
60-64		
65-69		
70-74		
75+		
Total	1	1,373

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74	1	1,324
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	1,324

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Oak Lodge Sanitary District/2524
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Oak Lodge Sanitary District/2524

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

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The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Oak Lodge Sanitary District -- #2524

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Oak Lodge Sanitary District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oak Lodge Sanitary District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Oak Lodge Sanitary District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.69%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.59%	0.59%	0.59%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.88%**	**8.55%**	**12.65%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**13.44%**	**9.03%**	**13.13%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 85%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	9.28%	9.28%
Minimum July 1, 2015 Rate	6.28%	3.28%
Maximum July 1, 2015 Rate	12.28%	15.28%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$8,194,776	$7,329,070	($865,706)	112%	$1,226,668	(71%)
12/31/2008	6,153,179	7,531,284	1,378,105	82%	1,220,058	113%
12/31/2009	7,325,766	8,320,974	995,208	88%	1,586,102	63%
12/31/2010	7,332,942	8,828,349	1,495,407	83%	1,520,200	98%
12/31/2011	7,106,323	9,259,870	2,153,547	77%	1,814,102	119%
12/31/2012	7,723,464	9,061,693	1,338,229	85%	1,870,816	72%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Oak Lodge Sanitary District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,338,229	$2,153,547
Allocated pooled OPSRP UAL	131,860	30,953
Side account	0	0
Net unfunded pension actuarial accrued liability	1,470,089	2,184,500
Combined valuation payroll	1,870,816	1,814,102
Net pension UAL as a percentage of payroll	79%	120%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$39,251	$46,995

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$121,078	$75,729
Tier 1/Tier 2 valuation payroll	1,035,336	1,004,590
Tier 1/Tier 2 pension normal cost rate	11.69%	7.54%
Tier 1/ Tier 2 Actuarial accrued liability	$9,061,693	$9,259,870
Actuarial asset value	7,723,464	7,106,323
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,338,229	2,153,547
Tier 1/ Tier 2 Funded status	85%	77%
Combined valuation payroll	$1,870,816	$1,814,102
Tier 1/Tier 2 UAL as a percentage of payroll	72%	119%
Tier 1/Tier 2 UAL rate	0.59%	5.64%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	12	12
Tier 1/Tier 2 dormant members	6	6
Tier 1/Tier 2 retirees and beneficiaries	17	19

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,870,816	1,814,102
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$990,354	$873,167
2. Employer reserves	3,258,825	2,722,642
3. Benefits in force reserve	3,474,285	3,510,513
4. Total market value of assets *(1. + 2. + 3.)*	**$7,723,464**	**$7,106,323**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$7,106,323
2.	Regular employer contributions	128,590
3.	Benefit payments and expenses	(545,661)
4.	Adjustments[2]	103,228
5.	Interest credited	930,984
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$7,723,464**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	58,755	8,670
Tier 2 Police & Fire	0	0
Tier 2 General Service	62,323	67,059
Total	**$121,078**	**$75,729**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$74,727	$121,078	$46,351

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	1,361,391	1,316,184
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	970,050	823,527
▪ **Total Active Members**	**$2,331,441**	**$2,139,711**
Dormant Members	875,602	735,461
Retired Members and Beneficiaries	5,854,650	6,384,698
Total Actuarial Accrued Liability	**$9,061,693**	**$9,259,870**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$9,560,868	$9,061,693	($499,175)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$9,061,693	$9,259,870
2. Actuarial value of assets	7,723,464	7,106,323
3. Unfunded accrued liability *(1. – 2.)*	1,338,229	2,153,547
4. Funded percentage *(2. ÷ 1.)*	85%	77%
5. Combined valuation payroll	$1,870,816	$1,814,102
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	72%	119%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,338,229	$96,861
Total				**$1,338,229**	**$96,861**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$9,259,870
b. Normal cost at December 31, 2011	75,729
c. Benefit payments during 2012	(541,390)
d. Interest at 8.0% to December 31, 2012	725,192
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	9,519,401
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(499,175)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	9,020,226
2. Actuarial accrued liability at December 31, 2012	9,061,693
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(41,467)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	7,106,323
b. Contributions for 2012[1]	128,590
c. Benefit payments and expenses during 2012	(545,661)
d. Interest at 8.0% to December 31, 2012	551,823
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	7,241,075
5. Actuarial value of assets at December 31, 2012	7,723,464
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	482,389
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$440,922**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$2,153,547**
2. Expected increase	124,779
3. Liability (gain)/loss	41,467
4. Asset (gain)/loss	(482,389)
5. Change due to changes in assumptions, methods, and plan provisions	(499,175)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,338,229**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	58,755	404,841	14.51%	8,670	383,547	2.26%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	62,323	630,495	9.88%	67,059	621,043	10.80%
Total	**$121,078**	**$1,035,336**	**11.69%**	**$75,729**	**$1,004,590**	**7.54%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,338,229	$2,153,547
2. Next year's Tier 1/Tier 2 UAL payment	96,861	156,924
3. Combined valuation payroll	1,870,816	1,814,102
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.18%	8.65%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.69%	7.54%
b. Tier 1/Tier 2 UAL rate	5.18%	8.65%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.00%	16.32%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.28%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.28%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.86%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	85%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.28%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	12.28%
7. July 1, 2015 total pension rate, before adjustment	17.00%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.72%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	5.18%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.46%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.28%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.69%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.69%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.69%	7.54%
b. Tier 1/Tier 2 UAL rate	0.46%	5.51%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.28%	13.18%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$404,841	$0	$404,841
Tier 2	630,495	0	630,495
Tier 1/Tier 2 valuation payroll	1,035,336	0	1,035,336
OPSRP valuation payroll	835,480	0	835,480
Combined valuation payroll	**$1,870,816**	**$0**	**$1,870,816**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	4	8	12	24	4	8	12	24
Police & Fire	0	0	0	0	0	0	0	0
Total	4	8	12	24	4	8	12	24
Active Members with previous service segments with the employer								
General Service	2	1	N/A	3	7	3	N/A	10
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	2	1	N/A	3	7	3	N/A	10
Dormant Members								
General Service	5	1	1	7	5	1	0	6
Police & Fire	0	0	0	0	0	0	0	0
Total	5	1	1	7	5	1	0	6
Retired Members and Beneficiaries								
General Service	15	2	0	17	16	3	0	19
Police & Fire	0	0	0	0	0	0	0	0
Total	15	2	0	17	16	3	0	19
Grand Total Number of Members	**26**	**12**	**13**	**51**	**32**	**15**	**12**	**59**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		1								**1**
35-39		1		1						**2**
40-44			1							**1**
45-49										
50-54			2	1		2				**5**
55-59			1	1						**2**
60-64					1					**1**
65-69										
70-74										
75+										
Total	**0**	**2**	**4**	**3**	**1**	**2**	**0**	**0**	**0**	**12**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	1,134
50-54		
55-59	3	631
60-64	2	1,988
65-69		
70-74		
75+		
Total	6	1,167

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	10	3,019
65-69	2	1,613
70-74	3	1,797
75-79	1	3,169
80-84		
85-89	1	2,584
90-94		
95-99		
100+		
Total	17	2,621

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Nyssa Road Assessment District #2/2550
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Nyssa Road Assessment District #2/2550

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Nyssa Road Assessment District #2 -- #2550

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Nyssa Road Assessment District #2 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Nyssa Road Assessment District #2.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Nyssa Road Assessment District #2

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.90%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	21.27%	21.27%	21.27%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**36.77%**	**29.23%**	**33.33%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**37.33%**	**29.71%**	**33.81%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 69%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	41.65%	41.65%
Minimum July 1, 2015 Rate	33.32%	24.99%
Maximum July 1, 2015 Rate	49.98%	58.31%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,171,151	$1,671,200	$500,049	70%	$146,956	340%
12/31/2008	835,920	1,683,852	847,932	50%	144,035	589%
12/31/2009	933,276	1,702,643	769,367	55%	154,312	499%
12/31/2010	1,006,310	1,752,967	746,657	57%	158,434	471%
12/31/2011	1,003,416	1,782,911	779,495	56%	162,497	480%
12/31/2012	1,092,540	1,592,557	500,017	69%	171,200	292%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Nyssa Road Assessment District #2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$500,017	$779,495
Allocated pooled OPSRP UAL	12,067	2,773
Side account	0	0
Net unfunded pension actuarial accrued liability	512,084	782,268
Combined valuation payroll	171,200	162,497
Net pension UAL as a percentage of payroll	299%	481%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,592	$4,210

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$19,602	$5,545
Tier 1/Tier 2 valuation payroll	131,574	128,807
Tier 1/Tier 2 pension normal cost rate	14.90%	4.30%
Tier 1/ Tier 2 Actuarial accrued liability	$1,592,557	$1,782,911
Actuarial asset value	1,092,540	1,003,416
Tier 1/Tier 2 Unfunded actuarial accrued liability	500,017	779,495
Tier 1/ Tier 2 Funded status	69%	56%
Combined valuation payroll	$171,200	$162,497
Tier 1/Tier 2 UAL as a percentage of payroll	292%	480%
Tier 1/Tier 2 UAL rate	21.27%	39.85%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	7	7

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	171,200	162,497
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$235,353	$205,041
2. Employer reserves	223,147	122,864
3. Benefits in force reserve	634,040	675,511
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,092,540**	**$1,003,416**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$1,003,416
2.	Regular employer contributions	73,610
3.	Benefit payments and expenses	(99,580)
4.	Adjustments[2]	(12,401)
5.	Interest credited	127,496
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,092,540**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	14,179	274
Tier 2 Police & Fire	0	0
Tier 2 General Service	5,423	5,271
Total	**$19,602**	**$5,545**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$5,603	$19,602	$13,999

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	406,439	447,076
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	20,640	11,153
▪ **Total Active Members**	**$427,079**	**$458,229**
Dormant Members	97,033	96,107
Retired Members and Beneficiaries	1,068,445	1,228,575
Total Actuarial Accrued Liability	**$1,592,557**	**$1,782,911**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,726,320	$1,592,557	($133,763)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,592,557	$1,782,911
2. Actuarial value of assets	1,092,540	1,003,416
3. Unfunded accrued liability *(1. – 2.)*	500,017	779,495
4. Funded percentage *(2. ÷ 1.)*	69%	56%
5. Combined valuation payroll	$171,200	$162,497
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	292%	480%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$500,017	$36,191
Total				**$500,017**	**$36,191**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,782,911
b. Normal cost at December 31, 2011	5,545
c. Benefit payments during 2012	(98,801)
d. Interest at 8.0% to December 31, 2012	139,124
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,828,779
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(133,763)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,695,016
2. Actuarial accrued liability at December 31, 2012	1,592,557
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	102,459
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,003,416
b. Contributions for 2012[1]	73,610
c. Benefit payments and expenses during 2012	(99,580)
d. Interest at 8.0% to December 31, 2012	79,234
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,056,680
5. Actuarial value of assets at December 31, 2012	1,092,540
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	35,860
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$138,319**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$779,495**
2. Expected increase	(7,396)
3. Liability (gain)/loss	(102,459)
4. Asset (gain)/loss	(35,860)
5. Change due to changes in assumptions, methods, and plan provisions	(133,763)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$500,017**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	14,179	77,956	18.19%	274	75,793	0.36%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	5,423	53,618	10.11%	5,271	53,014	9.94%
Total	**$19,602**	**$131,574**	**14.90%**	**$5,545**	**$128,807**	**4.30%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$500,017	$779,495
2. Next year's Tier 1/Tier 2 UAL payment	36,191	64,550
3. Combined valuation payroll	171,200	162,497
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	21.14%	39.72%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.90%	4.30%
b. Tier 1/Tier 2 UAL rate	21.14%	39.72%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	36.17%	44.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	41.65%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	41.65%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	8.33%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	8.33%
c. Funded percentage	69%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	9.16%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	32.49%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	50.81%
7. July 1, 2015 total pension rate, before adjustment	36.17%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	21.14%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	21.14%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	36.17%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.90%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.90%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	36.17%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.90%	4.30%
b. Tier 1/Tier 2 UAL rate	21.14%	39.72%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	36.17%	44.15%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$77,956	$0	$77,956
Tier 2	53,618	0	53,618
Tier 1/Tier 2 valuation payroll	131,574	0	131,574
OPSRP valuation payroll	39,626	0	39,626
Combined valuation payroll	**$171,200**	**$0**	**$171,200**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	1	4	2	1	1	4
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	1	4	2	1	1	4
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	1	0	N/A	1
Dormant Members								
General Service	1	0	1	2	1	0	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	0	1	2
Retired Members and Beneficiaries								
General Service	7	0	0	7	7	0	0	7
Police & Fire	0	0	0	0	0	0	0	0
Total	7	0	0	7	7	0	0	7
Grand Total Number of Members	**10**	**1**	**2**	**13**	**11**	**1**	**2**	**14**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54			1							**1**
55-59										
60-64					2					**2**
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**3**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	715
60-64		
65-69		
70-74		
75+		
Total	1	715

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	649
60-64		
65-69		
70-74	1	194
75-79	1	2,344
80-84	1	6,164
85-89	1	177
90-94	1	349
95-99		
100+		
Total	7	1,504

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Northeast Oregon Housing Authority/2637
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Northeast Oregon Housing Authority/2637

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Northeast Oregon Housing Authority -- #2637

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Northeast Oregon Housing Authority to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Northeast Oregon Housing Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Northeast Oregon Housing Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.00%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(6.43%)	(6.43%)	(6.43%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**10.17%**	**1.53%**	**5.63%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**10.73%**	**2.01%**	**6.11%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 92%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	6.57%	6.57%
Minimum July 1, 2015 Rate	3.57%	0.57%
Maximum July 1, 2015 Rate	9.57%	12.57%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,897,572	$2,474,079	($423,493)	117%	$689,746	(61%)
12/31/2008	2,378,561	2,656,235	277,674	90%	672,380	41%
12/31/2009	2,762,649	2,872,484	109,835	96%	784,113	14%
12/31/2010	3,078,550	3,121,528	42,978	99%	816,864	5%
12/31/2011	2,794,568	3,360,981	566,413	83%	683,194	83%
12/31/2012	3,107,972	3,364,806	256,834	92%	703,856	36%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Northeast Oregon Housing Authority

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$256,834	$566,413
Allocated pooled OPSRP UAL	49,610	11,657
Side account	0	0
Net unfunded pension actuarial accrued liability	306,444	578,070
Combined valuation payroll	703,856	683,194
Net pension UAL as a percentage of payroll	44%	85%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$14,767	$17,698

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$72,699	$38,679
Tier 1/Tier 2 valuation payroll	454,448	516,749
Tier 1/Tier 2 pension normal cost rate	16.00%	7.49%
Tier 1/ Tier 2 Actuarial accrued liability	$3,364,806	$3,360,981
Actuarial asset value	3,107,972	2,794,568
Tier 1/Tier 2 Unfunded actuarial accrued liability	256,834	566,413
Tier 1/ Tier 2 Funded status	92%	83%
Combined valuation payroll	$703,856	$683,194
Tier 1/Tier 2 UAL as a percentage of payroll	36%	83%
Tier 1/Tier 2 UAL rate	(6.43%)	2.08%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	9	13
Tier 1/Tier 2 dormant members	5	4
Tier 1/Tier 2 retirees and beneficiaries	5	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	703,856	683,194
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$824,638	$750,045
2. Employer reserves	1,675,543	1,556,457
3. Benefits in force reserve	607,791	488,066
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,107,972**	**$2,794,568**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$2,794,568
2. Regular employer contributions	34,576
3. Benefit payments and expenses	(95,458)
4. Adjustments [2]	19,080
5. Interest credited	355,205
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,107,972**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	55,200	16,778
Tier 2 Police & Fire	0	0
Tier 2 General Service	17,499	21,901
Total	**$72,699**	**$38,679**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$33,225	$72,699	$39,474

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	1,517,973	1,685,868
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	291,463	258,307
▪ **Total Active Members**	**$1,809,436**	**$1,944,175**
Dormant Members	531,158	529,143
Retired Members and Beneficiaries	1,024,212	887,663
Total Actuarial Accrued Liability	**$3,364,806**	**$3,360,981**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$3,643,587	$3,364,806	($278,781)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,364,806	$3,360,981
2. Actuarial value of assets	3,107,972	2,794,568
3. Unfunded accrued liability *(1. – 2.)*	256,834	566,413
4. Funded percentage *(2. ÷ 1.)*	92%	83%
5. Combined valuation payroll	$703,856	$683,194
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	36%	83%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$256,834	$18,590
Total				**$256,834**	**$18,590**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$3,360,981
b. Normal cost at December 31, 2011	38,679
c. Benefit payments during 2012	(94,711)
d. Interest at 8.0% to December 31, 2012	268,184
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,573,133
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(278,781)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,294,352
2. Actuarial accrued liability at December 31, 2012	3,364,806
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(70,454)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,794,568
b. Contributions for 2012[1]	34,576
c. Benefit payments and expenses during 2012	(95,458)
d. Interest at 8.0% to December 31, 2012	221,130
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,954,817
5. Actuarial value of assets at December 31, 2012	3,107,972
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	153,155
7. Total actuarial gain/(loss) *(3. + 6.)*	**$82,701**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$566,413**
2. Expected increase	51,903
3. Liability (gain)/loss	70,454
4. Asset (gain)/loss	(153,155)
5. Change due to changes in assumptions, methods, and plan provisions	(278,781)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$256,834**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	55,200	299,715	18.42%	16,778	344,054	4.88%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	17,499	154,733	11.31%	21,901	172,695	12.68%
Total	**$72,699**	**$454,448**	**16.00%**	**$38,679**	**$516,749**	**7.49%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$256,834	$566,413
2. Next year's Tier 1/Tier 2 UAL payment	18,590	38,386
3. Combined valuation payroll	703,856	683,194
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.64%	5.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.00%	7.49%
b. Tier 1/Tier 2 UAL rate	2.64%	5.62%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.77%	13.24%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	6.57%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	6.57%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.31%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	92%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	3.57%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	9.57%
7. July 1, 2015 total pension rate, before adjustment	18.77%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(9.20%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.64%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(6.56%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	9.57%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.00%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.00%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	9.57%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.00%	7.49%
b. Tier 1/Tier 2 UAL rate	(6.56%)	1.95%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	9.57%	9.57%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$299,715	$0	$299,715
Tier 2	154,733	0	154,733
Tier 1/Tier 2 valuation payroll	454,448	0	454,448
OPSRP valuation payroll	249,408	0	249,408
Combined valuation payroll	**$703,856**	**$0**	**$703,856**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	6	3	7	16	9	4	5	18
Police & Fire	0	0	0	0	0	0	0	0
Total	6	3	7	16	9	4	5	18
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	1	0	N/A	1
Dormant Members								
General Service	5	0	1	6	4	0	1	5
Police & Fire	0	0	0	0	0	0	0	0
Total	5	0	1	6	4	0	1	5
Retired Members and Beneficiaries								
General Service	4	1	0	5	3	0	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	4	1	0	5	3	0	0	3
Grand Total Number of Members	**15**	**4**	**8**	**27**	**17**	**4**	**6**	**27**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54			1	1						**2**
55-59		1		2		1				**4**
60-64				1		2				**3**
65-69										
70-74										
75+										
Total	**0**	**1**	**1**	**4**	**0**	**3**	**0**	**0**	**0**	**9**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	2,089
45-49		
50-54	3	539
55-59		
60-64	1	2,032
65-69		
70-74		
75+		
Total	5	1,147

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	1,223
65-69	2	1,864
70-74		
75-79		
80-84	1	1,288
85-89		
90-94		
95-99		
100+		
Total	5	1,492

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

North Clackamas County Water Commission/2835
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
North Clackamas County Water Commission/2835

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

North Clackamas County Water Commission -- #2835

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for North Clackamas County Water Commission to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to North Clackamas County Water Commission.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for North Clackamas County Water Commission

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.50%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(5.57%)	(5.57%)	(5.57%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**10.53%**	**2.39%**	**6.49%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.09%**	**2.87%**	**6.97%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 74%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	6.93%	6.93%
Minimum July 1, 2015 Rate	3.93%	0.93%
Maximum July 1, 2015 Rate	9.93%	12.93%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$190,419	$123,836	($66,583)	154%	$153,562	(43%)
12/31/2008	160,095	192,244	32,149	83%	288,572	11%
12/31/2009	207,219	235,186	27,967	88%	347,628	8%
12/31/2010	246,229	297,902	51,673	83%	277,048	19%
12/31/2011	267,657	344,501	76,844	78%	232,626	33%
12/31/2012	324,353	435,475	111,122	74%	245,417	45%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

North Clackamas County Water Commission

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$111,122	$76,844
Allocated pooled OPSRP UAL	17,298	3,969
Side account	0	0
Net unfunded pension actuarial accrued liability	128,420	80,813
Combined valuation payroll	245,417	232,626
Net pension UAL as a percentage of payroll	52%	35%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$5,149	$6,026

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$38,050	$16,335
Tier 1/Tier 2 valuation payroll	245,417	232,626
Tier 1/Tier 2 pension normal cost rate	15.50%	7.02%
Tier 1/ Tier 2 Actuarial accrued liability	$435,475	$344,501
Actuarial asset value	324,353	267,657
Tier 1/Tier 2 Unfunded actuarial accrued liability	111,122	76,844
Tier 1/ Tier 2 Funded status	74%	78%
Combined valuation payroll	$245,417	$232,626
Tier 1/Tier 2 UAL as a percentage of payroll	45%	33%
Tier 1/Tier 2 UAL rate	(5.57%)	2.41%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	245,417	232,626
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$71,602	$62,714
2. Employer reserves	252,751	204,943
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$324,353**	**$267,657**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$267,657
2.	Regular employer contributions	16,269
3.	Benefit payments and expenses	0
4.	Adjustments[2]	1,771
5.	Interest credited	38,656
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$324,353**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	27,784	6,095
Tier 2 Police & Fire	0	0
Tier 2 General Service	10,266	10,240
Total	**$38,050**	**$16,335**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$18,970	$38,050	$19,080

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	228,539	185,000
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	184,802	137,293
▪ **Total Active Members**	**$413,341**	**$322,293**
Dormant Members	22,134	22,208
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$435,475**	**$344,501**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$404,332	$435,475	$31,143

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$435,475	$344,501
2. Actuarial value of assets	324,353	267,657
3. Unfunded accrued liability *(1. – 2.)*	111,122	76,844
4. Funded percentage *(2. ÷ 1.)*	74%	78%
5. Combined valuation payroll	$245,417	$232,626
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	45%	33%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$111,122	$8,043
Total				**$111,122**	**$8,043**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$344,501
b. Normal cost at December 31, 2011	16,335
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	28,867
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	389,703
f. Change in actuarial accrued liability due to assumption, method, and plan changes	31,143
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	420,846
2. Actuarial accrued liability at December 31, 2012	435,475
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(14,629)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	267,657
b. Contributions for 2012[1]	16,269
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	22,063
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	305,989
5. Actuarial value of assets at December 31, 2012	324,353
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	18,364
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$3,735**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$76,844**
2. Expected increase	6,870
3. Liability (gain)/loss	14,629
4. Asset (gain)/loss	(18,364)
5. Change due to changes in assumptions, methods, and plan provisions	31,143
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$111,122**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	27,784	154,744	17.95%	6,095	146,267	4.17%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	10,266	90,673	11.32%	10,240	86,359	11.86%
Total	**$38,050**	**$245,417**	**15.50%**	**$16,335**	**$232,626**	**7.02%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$111,122	$76,844
2. Next year's Tier 1/Tier 2 UAL payment	8,043	5,304
3. Combined valuation payroll	245,417	232,626
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.28%	2.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.50%	7.02%
b. Tier 1/Tier 2 UAL rate	3.28%	2.28%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.91%	9.43%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	6.93%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	6.93%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	1.39%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	74%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5.	July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	3.93%
6.	July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	9.93%
7.	July 1, 2015 total pension rate, before adjustment	18.91%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(8.98%)
9.	July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	3.28%
10.	July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.70%)
11.	July 1, 2015 Tier 1/Tier 2 pension rate, after collar	9.93%
12.	Tier 1/Tier 2 retiree healthcare rate	0.56%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.50%
15.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.50%
16.	July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	9.93%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.50%	7.02%
b. Tier 1/Tier 2 UAL rate	(5.70%)	2.28%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	9.93%	9.43%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$154,744	$0	$154,744
Tier 2	90,673	0	90,673
Tier 1/Tier 2 valuation payroll	245,417	0	245,417
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$245,417**	**$0**	**$245,417**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	0	3	2	1	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	0	3	2	1	0	3
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	0	1	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	0	1	N/A	1
Dormant Members								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**3**	**2**	**0**	**5**	**3**	**2**	**0**	**5**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44					1					1
45-49										
50-54				1			1			2
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	1	1	0	1	0	0	3

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	277
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	277

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Neskowin Regional Sanitary Authority/2740
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Neskowin Regional Sanitary Authority/2740

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Neskowin Regional Sanitary Authority -- #2740

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Neskowin Regional Sanitary Authority to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Neskowin Regional Sanitary Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Neskowin Regional Sanitary Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.21%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.04%)	(2.04%)	(2.04%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.77%**	**5.92%**	**10.02%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**10.33%**	**6.40%**	**10.50%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 133%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	7.40%	7.40%
Minimum July 1, 2015 Rate	4.40%	1.40%
Maximum July 1, 2015 Rate	10.40%	13.40%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$201,719	$98,317	($103,402)	205%	$169,763	(61%)
12/31/2008	164,759	111,962	(52,797)	147%	145,101	(36%)
12/31/2009	162,588	112,598	(49,990)	144%	164,413	(30%)
12/31/2010	183,374	129,211	(54,163)	142%	167,047	(32%)
12/31/2011	188,492	141,097	(47,395)	134%	171,129	(28%)
12/31/2012	215,562	162,032	(53,530)	133%	178,643	(30%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Neskowin Regional Sanitary Authority

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($53,530)	($47,395)
Allocated pooled OPSRP UAL	12,591	2,920
Side account	0	0
Net unfunded pension actuarial accrued liability	(40,939)	(44,475)
Combined valuation payroll	178,643	171,129
Net pension UAL as a percentage of payroll	(23%)	(26%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,748	$4,433

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$5,834	$6,201
Tier 1/Tier 2 valuation payroll	52,053	49,808
Tier 1/Tier 2 pension normal cost rate	11.21%	12.45%
Tier 1/ Tier 2 Actuarial accrued liability	$162,032	$141,097
Actuarial asset value	215,562	188,492
Tier 1/Tier 2 Unfunded actuarial accrued liability	(53,530)	(47,395)
Tier 1/ Tier 2 Funded status	133%	134%
Combined valuation payroll	$178,643	$171,129
Tier 1/Tier 2 UAL as a percentage of payroll	(30%)	(28%)
Tier 1/Tier 2 UAL rate	(2.04%)	(2.55%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	178,643	171,129
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$18,732	$16,409
2. Employer reserves	181,716	157,399
3. Benefits in force reserve	15,114	14,685
4. Total market value of assets ***(1. + 2. + 3.)***	**$215,562**	**$188,492**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$188,492
2.	Regular employer contributions	1,656
3.	Benefit payments and expenses	(2,374)
4.	Adjustments[2]	1,241
5.	Interest credited	26,547
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$215,562**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	5,834	6,201
Total	**$5,834**	**$6,201**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$6,703	$5,834	($869)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	83,229	62,484
▪ **Total Active Members**	**$83,229**	**$62,484**
Dormant Members	53,333	51,905
Retired Members and Beneficiaries	25,470	26,708
Total Actuarial Accrued Liability	**$162,032**	**$141,097**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$157,268	$162,032	$4,764

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$162,032	$141,097
2. Actuarial value of assets	215,562	188,492
3. Unfunded accrued liability *(1. – 2.)*	(53,530)	(47,395)
4. Funded percentage *(2. ÷ 1.)*	133%	134%
5. Combined valuation payroll	$178,643	$171,129
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(30%)	(28%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($53,530)	($3,874)
Total				**($53,530)**	**($3,874)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$141,097
b. Normal cost at December 31, 2011	6,201
c. Benefit payments during 2012	(2,355)
d. Interest at 8.0% to December 31, 2012	11,690
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	156,633
f. Change in actuarial accrued liability due to assumption, method, and plan changes	4,764
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	161,397
2. Actuarial accrued liability at December 31, 2012	162,032
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(635)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	188,492
b. Contributions for 2012[1]	1,656
c. Benefit payments and expenses during 2012	(2,374)
d. Interest at 8.0% to December 31, 2012	15,051
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	202,825
5. Actuarial value of assets at December 31, 2012	215,562
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	12,737
7. Total actuarial gain/(loss) *(3. + 6.)*	**$12,102**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($47,395)**
2. Expected increase	1,203
3. Liability (gain)/loss	635
4. Asset (gain)/loss	(12,737)
5. Change due to changes in assumptions, methods, and plan provisions	4,764
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**($53,530)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	5,834	52,053	11.21%	6,201	49,808	12.45%
Total	**$5,834**	**$52,053**	**11.21%**	**$6,201**	**$49,808**	**12.45%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($53,530)	($47,395)
2. Next year's Tier 1/Tier 2 UAL payment	(3,874)	(4,585)
3. Combined valuation payroll	178,643	171,129
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.17%)	(2.68%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.21%	12.45%
b. Tier 1/Tier 2 UAL rate	(2.17%)	(2.68%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	9.17%	9.90%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	7.40%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	7.40%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.48%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	133%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.90%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	3.50%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.30%
7. July 1, 2015 total pension rate, before adjustment	9.17%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.17%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.17%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	9.17%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.21%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.21%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	9.17%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.21%	12.45%
b. Tier 1/Tier 2 UAL rate	(2.17%)	(2.68%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	9.17%	9.90%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	52,053	0	52,053
Tier 1/Tier 2 valuation payroll	52,053	0	52,053
OPSRP valuation payroll	126,590	0	126,590
Combined valuation payroll	**$178,643**	**$0**	**$178,643**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	3	4	0	1	3	4
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	3	4	0	1	3	4
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	1	1	0	2	1	1	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	0	2	1	1	0	2
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**3**	**2**	**3**	**8**	**3**	**2**	**3**	**8**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1							**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	198
60-64		
65-69	1	228
70-74		
75+		
Total	2	213

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	138
65-69		
70-74	1	43
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	90

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Nehalem Bay Wastewater Agency/2724
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Nehalem Bay Wastewater Agency/2724

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Nehalem Bay Wastewater Agency -- #2724

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Nehalem Bay Wastewater Agency to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Nehalem Bay Wastewater Agency.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Nehalem Bay Wastewater Agency

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.42%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(6.01%)	(6.01%)	(6.01%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**1.95%**	**6.05%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**2.43%**	**6.53%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 104%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,601,701	$1,370,160	($231,541)	117%	$256,029	(90%)
12/31/2008	1,255,664	1,442,024	186,360	87%	164,832	113%
12/31/2009	1,330,230	1,423,510	93,280	93%	254,429	37%
12/31/2010	1,376,367	1,506,536	130,169	91%	243,310	54%
12/31/2011	1,373,769	1,556,184	182,415	88%	289,012	63%
12/31/2012	1,530,538	1,473,807	(56,731)	104%	328,849	(17%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Nehalem Bay Wastewater Agency

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($56,731)	$182,415
Allocated pooled OPSRP UAL	23,178	4,931
Side account	0	0
Net unfunded pension actuarial accrued liability	(33,553)	187,346
Combined valuation payroll	328,849	289,012
Net pension UAL as a percentage of payroll	(10%)	65%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$6,899	$7,487

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$19,215	$130
Tier 1/Tier 2 valuation payroll	133,232	119,460
Tier 1/Tier 2 pension normal cost rate	14.42%	0.11%
Tier 1/ Tier 2 Actuarial accrued liability	$1,473,807	$1,556,184
Actuarial asset value	1,530,538	1,373,769
Tier 1/Tier 2 Unfunded actuarial accrued liability	(56,731)	182,415
Tier 1/ Tier 2 Funded status	104%	88%
Combined valuation payroll	$328,849	$289,012
Tier 1/Tier 2 UAL as a percentage of payroll	(17%)	63%
Tier 1/Tier 2 UAL rate	(6.01%)	5.33%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	328,849	289,012
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$230,783	$199,377
2. Employer reserves	729,308	618,298
3. Benefits in force reserve	570,447	556,094
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,530,538**	**$1,373,769**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,373,769
2. Regular employer contributions	19,705
3. Benefit payments and expenses	(89,593)
4. Adjustments[2]	42,308
5. Interest credited	184,348
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,530,538**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	19,215	130
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$19,215**	**$130**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$6,199	$19,215	$13,016

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	512,526	544,795
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$512,526**	**$544,795**
Dormant Members	0	0
Retired Members and Beneficiaries	961,281	1,011,389
Total Actuarial Accrued Liability	**$1,473,807**	**$1,556,184**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,613,538	$1,473,807	($139,731)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,473,807	$1,556,184
2. Actuarial value of assets	1,530,538	1,373,769
3. Unfunded accrued liability *(1. – 2.)*	(56,731)	182,415
4. Funded percentage *(2. ÷ 1.)*	104%	88%
5. Combined valuation payroll	$328,849	$289,012
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(17%)	63%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($56,731)	($4,106)
Total				**($56,731)**	**($4,106)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,556,184
b. Normal cost at December 31, 2011	130
c. Benefit payments during 2012	(88,891)
d. Interest at 8.0% to December 31, 2012	120,949
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,588,372
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(139,731)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,448,641
2. Actuarial accrued liability at December 31, 2012	1,473,807
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(25,166)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,373,769
b. Contributions for 2012[1]	19,705
c. Benefit payments and expenses during 2012	(89,593)
d. Interest at 8.0% to December 31, 2012	107,106
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,410,988
5. Actuarial value of assets at December 31, 2012	1,530,538
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	119,550
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$94,384**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$182,415**
2. Expected increase	(5,031)
3. Liability (gain)/loss	25,166
4. Asset (gain)/loss	(119,550)
5. Change due to changes in assumptions, methods, and plan provisions	(139,731)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($56,731)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	19,215	133,232	14.42%	130	119,460	0.11%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$19,215**	**$133,232**	**14.42%**	**$130**	**$119,460**	**0.11%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($56,731)	$182,415
2. Next year's Tier 1/Tier 2 UAL payment	(4,106)	11,343
3. Combined valuation payroll	328,849	289,012
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(1.25%)	3.92%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.42%	0.11%
b. Tier 1/Tier 2 UAL rate	(1.25%)	3.92%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.30%	4.16%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	5.41%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	104%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5.	July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6.	July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7.	July 1, 2015 total pension rate, before adjustment	13.30%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.89%)
9.	July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(1.25%)
10.	July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(6.14%)
11.	July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12.	Tier 1/Tier 2 retiree healthcare rate	0.56%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.42%
15.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.42%
16.	July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.42%	0.11%
b. Tier 1/Tier 2 UAL rate	(6.14%)	5.20%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	5.44%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$133,232	$0	$133,232
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	133,232	0	133,232
OPSRP valuation payroll	195,617	0	195,617
Combined valuation payroll	**$328,849**	**$0**	**$328,849**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	0	4	6	2	0	4	6
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	4	6	2	0	4	6
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	5	0	0	5	5	0	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**7**	**0**	**4**	**11**	**7**	**0**	**4**	**11**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49					1					1
50-54										
55-59					1					1
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	2	0	0	0	0	2

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	1,639
60-64	2	1,735
65-69	2	688
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	1,297

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Mt Angel Fire District/2861
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Mt Angel Fire District/2861

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mt Angel Fire District -- #2861

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Mt Angel Fire District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mt Angel Fire District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Mt Angel Fire District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.28%)	(3.28%)	(3.28%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.65%**	**4.68%**	**8.78%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.21%**	**5.16%**	**9.26%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 100%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.05%	11.05%
Minimum July 1, 2015 Rate	8.05%	5.05%
Maximum July 1, 2015 Rate	14.05%	17.05%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$9,499	$0	($9,499)	0%	$17,494	(54%)
12/31/2008	6,893	0	(6,893)	0%	20,344	(34%)
12/31/2009	7,169	0	(7,169)	0%	21,279	(34%)
12/31/2010	7,032	0	(7,032)	0%	24,423	(29%)
12/31/2011	6,360	0	(6,360)	100%	24,660	(26%)
12/31/2012	7,147	0	(7,147)	0%	15,167	(47%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Mt Angel Fire District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($7,147)	($6,360)
Allocated pooled OPSRP UAL	1,069	421
Side account	0	0
Net unfunded pension actuarial accrued liability	(6,078)	(5,939)
Combined valuation payroll	15,167	24,660
Net pension UAL as a percentage of payroll	(40%)	(24%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$318	$639

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
Tier 1/ Tier 2 Actuarial accrued liability	$0	$0
Actuarial asset value	7,147	6,360
Tier 1/Tier 2 Unfunded actuarial accrued liability	(7,147)	(6,360)
Tier 1/ Tier 2 Funded status	0%	0%
Combined valuation payroll	$15,167	$24,660
Tier 1/Tier 2 UAL as a percentage of payroll	(47%)	(26%)
Tier 1/Tier 2 UAL rate	(3.28%)	(2.18%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	15,167	24,660
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	7,147	6,360
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$7,147**	**$6,360**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$6,360
2.	Regular employer contributions	(78)
3.	Benefit payments and expenses	0
4.	Adjustments[2]	(44)
5.	Interest credited	910
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$7,147**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$0**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$0	$0
2. Actuarial value of assets	7,147	6,360
3. Unfunded accrued liability *(1. – 2.)*	(7,147)	(6,360)
4. Funded percentage *(2. ÷ 1.)*	100%	100%
5. Combined valuation payroll	$15,167	$24,660
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(47%)	(26%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($7,147)	($517)
Total				**($7,147)**	**($517)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$0
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	0
2. Actuarial accrued liability at December 31, 2012	0
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	6,360
b. Contributions for 2012[1]	(78)
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	506
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	6,787
5. Actuarial value of assets at December 31, 2012	7,147
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	360
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$360**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($6,360)**
2. Expected increase	(427)
3. Liability (gain)/loss	0
4. Asset (gain)/loss	(360)
5. Change due to changes in assumptions, methods, and plan provisions	0
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($7,147)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**14.33%**	**$0**	**$0**	**10.82%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($7,147)	($6,360)
2. Next year's Tier 1/Tier 2 UAL payment	(517)	(569)
3. Combined valuation payroll	15,167	24,660
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.41%)	(2.31%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	(3.41%)	(2.31%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	11.05%	8.64%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.05%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.05%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	(3.41%)	(2.31%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.05%	8.64%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	3,163	12,004	15,167
Combined valuation payroll	**$3,163**	**$12,004**	**$15,167**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	1	1	0	0	0	0
Total	0	0	2	2	0	0	1	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**0**	**2**	**2**	**0**	**0**	**1**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Mosier Fire District/2873
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Mosier Fire District/2873

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Mosier Fire District/2873

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mosier Fire District -- #2873

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Mosier Fire District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mosier Fire District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Mosier Fire District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.13%	0.13%	0.13%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.06%**	**8.09%**	**12.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.62%**	**8.57%**	**12.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 100%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.46%	14.46%
Minimum July 1, 2015 Rate	11.46%	8.46%
Maximum July 1, 2015 Rate	17.46%	20.46%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$0	0%
12/31/2008	0	0	0	0%	0	0%
12/31/2009	0	0	0	0%	0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	36,000	0%
12/31/2012	(15)	0	15	0%	38,970	0%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Mosier Fire District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$15	$0
Allocated pooled OPSRP UAL	2,747	614
Side account	0	0
Net unfunded pension actuarial accrued liability	2,762	614
Combined valuation payroll	38,970	36,000
Net pension UAL as a percentage of payroll	7%	2%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$818	$933

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
Tier 1/ Tier 2 Actuarial accrued liability	$0	$0
Actuarial asset value	(15)	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	15	0
Tier 1/ Tier 2 Funded status	0%	0%
Combined valuation payroll	$38,970	$36,000
Tier 1/Tier 2 UAL as a percentage of payroll	0%	0%
Tier 1/Tier 2 UAL rate	0.13%	0.13%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	38,970	36,000
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	(15)	0
3. Benefits in force reserve	0	0
4. Total market value of assets *(1. + 2. + 3.)*	**($15)**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$0
2. Regular employer contributions	40
3. Benefit payments and expenses	0
4. Adjustments[2]	(61)
5. Interest credited	6
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**($15)**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$0**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$0	$0
2. Actuarial value of assets	(15)	0
3. Unfunded accrued liability *(1. – 2.)*	15	0
4. Funded percentage *(2. ÷ 1.)*	100%	0%
5. Combined valuation payroll	$38,970	$36,000
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	0%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$15	$1
Total				**$15**	**$1**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$0
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	0
2. Actuarial accrued liability at December 31, 2012	0
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	0
b. Contributions for 2012[1]	40
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	2
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	41
5. Actuarial value of assets at December 31, 2012	(15)
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(56)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($56)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$0**
2. Expected increase	0
3. Liability (gain)/loss	0
4. Asset (gain)/loss	56
5. Change due to changes in assumptions, methods, and plan provisions	0
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$15**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**14.33%**	**$0**	**$0**	**10.82%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$15	$0
2. Next year's Tier 1/Tier 2 UAL payment	1	0
3. Combined valuation payroll	38,970	36,000
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.00%	0.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	0.00%	0.00%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.46%	10.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.46%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.46%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	0.00%	0.00%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.46%	10.95%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	0	38,970	38,970
Combined valuation payroll	**$0**	**$38,970**	**$38,970**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	1	1	0	0	1	1
Total	0	0	1	1	0	0	1	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Milton-Freewater Cemetery District #3/2708
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Milton-Freewater Cemetery District #3/2708

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Milton-Freewater Cemetery District #3/2708

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Milton-Freewater Cemetery District #3 -- #2708

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Milton-Freewater Cemetery District #3 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Milton-Freewater Cemetery District #3.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Milton-Freewater Cemetery District #3

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	9.93%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	31.61%	31.61%	31.61%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**42.14%**	**39.57%**	**43.67%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**42.70%**	**40.05%**	**44.15%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 47%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	33.40%	33.40%
Minimum July 1, 2015 Rate	26.72%	20.04%
Maximum July 1, 2015 Rate	40.08%	46.76%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$69,982	$0	($69,982)	0%	$0	0%
12/31/2008	51,086	0	(51,086)	0%	0	0%
12/31/2009	60,844	0	(60,844)	0%	0	0%
12/31/2010	68,413	103,553	35,140	66%	37,358	94%
12/31/2011	75,406	158,314	82,908	48%	20,879	397%
12/31/2012	86,281	182,208	95,927	47%	22,055	435%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Milton-Freewater Cemetery District #3

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$95,927	$82,908
Allocated pooled OPSRP UAL	1,554	356
Side account	0	0
Net unfunded pension actuarial accrued liability	97,481	83,264
Combined valuation payroll	22,055	20,879
Net pension UAL as a percentage of payroll	442%	399%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$463	$541

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$2,190	$2,539
Tier 1/Tier 2 valuation payroll	22,055	20,879
Tier 1/Tier 2 pension normal cost rate	9.93%	12.16%
Tier 1/ Tier 2 Actuarial accrued liability	$182,208	$158,314
Actuarial asset value	86,281	75,406
Tier 1/Tier 2 Unfunded actuarial accrued liability	95,927	82,908
Tier 1/ Tier 2 Funded status	47%	48%
Combined valuation payroll	$22,055	$20,879
Tier 1/Tier 2 UAL as a percentage of payroll	435%	397%
Tier 1/Tier 2 UAL rate	31.61%	25.64%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	0	0

1 *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	22,055	20,879
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$13,520	$11,781
2. Employer reserves	72,761	63,625
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$86,281**	**$75,406**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$75,406
2.	Regular employer contributions	0
3.	Benefit payments and expenses	0
4.	Adjustments[2]	31
5.	Interest credited	10,844
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$86,281**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	**December 31, 2011**
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	2,190	2,539
Total	**$2,190**	**$2,539**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$2,780	$2,190	($590)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	27,630	21,111
▪ **Total Active Members**	**$27,630**	**$21,111**
Dormant Members	154,578	137,203
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$182,208**	**$158,314**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$185,460	$182,208	($3,252)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$182,208	$158,314
2. Actuarial value of assets	86,281	75,406
3. Unfunded accrued liability *(1. – 2.)*	95,927	82,908
4. Funded percentage *(2. ÷ 1.)*	47%	48%
5. Combined valuation payroll	$22,055	$20,879
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	435%	397%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$95,927	$6,943
Total				**$95,927**	**$6,943**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$158,314
b. Normal cost at December 31, 2011	2,539
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	12,868
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	173,721
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(3,252)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	170,469
2. Actuarial accrued liability at December 31, 2012	182,208
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(11,739)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	75,406
b. Contributions for 2012[1]	0
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	6,032
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	81,439
5. Actuarial value of assets at December 31, 2012	86,281
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	4,842
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($6,897)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$82,908**
2. Expected increase	9,374
3. Liability (gain)/loss	11,739
4. Asset (gain)/loss	(4,842)
5. Change due to changes in assumptions, methods, and plan provisions	(3,252)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$95,927**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	2,190	22,055	9.93%	2,539	20,879	12.16%
Total	**$2,190**	**$22,055**	**9.93%**	**$2,539**	**$20,879**	**12.16%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$95,927	$82,908
2. Next year's Tier 1/Tier 2 UAL payment	6,943	5,327
3. Combined valuation payroll	22,055	20,879
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	31.48%	25.51%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.93%	12.16%
b. Tier 1/Tier 2 UAL rate	31.48%	25.51%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	41.54%	37.80%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	33.40%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	33.40%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	6.68%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	6.68%
c. Funded percentage	47%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	13.36%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	20.04%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	46.76%
7. July 1, 2015 total pension rate, before adjustment	41.54%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	31.48%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	31.48%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	41.54%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	9.93%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	9.93%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	41.54%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.93%	12.16%
b. Tier 1/Tier 2 UAL rate	31.48%	25.51%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	41.54%	37.80%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	22,055	0	22,055
Tier 1/Tier 2 valuation payroll	22,055	0	22,055
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$22,055**	**$0**	**$22,055**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**2**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1							1
60-64										
65-69										
70-74										
75+										
Total	0	0	1	0	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	1,150
60-64		
65-69		
70-74		
75+		
Total	1	1,150

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Millington Rural Fire Protection District/2782
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Millington Rural Fire Protection District/2782

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Millington Rural Fire Protection District -- #2782

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Millington Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Millington Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Millington Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	18.51%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(11.49%)	(11.49%)	(11.49%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**7.62%**	**0.00%**	**0.57%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**8.18%**	**0.48%**	**1.05%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 139%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$224,143	$143,038	($81,105)	157%	$49,882	(163%)
12/31/2008	186,290	159,772	(26,518)	117%	50,937	(52%)
12/31/2009	220,360	176,331	(44,029)	125%	51,690	(85%)
12/31/2010	246,303	186,201	(60,102)	132%	51,994	(116%)
12/31/2011	258,024	202,616	(55,408)	127%	51,989	(107%)
12/31/2012	298,900	214,629	(84,271)	139%	52,504	(161%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Millington Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($84,271)	($55,408)
Allocated pooled OPSRP UAL	3,701	887
Side account	0	0
Net unfunded pension actuarial accrued liability	(80,570)	(54,521)
Combined valuation payroll	52,504	51,989
Net pension UAL as a percentage of payroll	(153%)	(105%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,102	$1,347

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$9,718	$6,524
Tier 1/Tier 2 valuation payroll	52,504	51,989
Tier 1/Tier 2 pension normal cost rate	18.51%	14.72%
Tier 1/ Tier 2 Actuarial accrued liability	$214,629	$202,616
Actuarial asset value	298,900	258,024
Tier 1/Tier 2 Unfunded actuarial accrued liability	(84,271)	(55,408)
Tier 1/ Tier 2 Funded status	139%	127%
Combined valuation payroll	$52,504	$51,989
Tier 1/Tier 2 UAL as a percentage of payroll	(161%)	(107%)
Tier 1/Tier 2 UAL rate	(11.49%)	(9.31%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	52,504	51,989
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$78,859	$69,332
2. Employer reserves	220,041	188,692
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$298,900**	**$258,024**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$258,024
2. Regular employer contributions	3,764
3. Benefit payments and expenses	0
4. Adjustments [2]	3,707
5. Interest credited	33,405
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$298,900**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$9,718	$6,524
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$9,718**	**$6,524**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$6,804	$9,718	$2,914

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$214,629	$202,616
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$214,629**	**$202,616**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$214,629**	**$202,616**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$216,989	$214,629	($2,360)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$214,629	$202,616
2. Actuarial value of assets	298,900	258,024
3. Unfunded accrued liability *(1. – 2.)*	(84,271)	(55,408)
4. Funded percentage *(2. ÷ 1.)*	139%	127%
5. Combined valuation payroll	$52,504	$51,989
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(161%)	(107%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($84,271)	($6,100)
Total				**($84,271)**	**($6,100)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$202,616
b. Normal cost at December 31, 2011	6,524
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	16,731
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	225,871
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(2,360)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	223,511
2. Actuarial accrued liability at December 31, 2012	214,629
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	8,882
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	258,024
b. Contributions for 2012[1]	3,764
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	20,792
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	282,581
5. Actuarial value of assets at December 31, 2012	298,900
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	16,320
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$25,202**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($55,408)**
2. Expected increase	(1,301)
3. Liability (gain)/loss	(8,882)
4. Asset (gain)/loss	(16,320)
5. Change due to changes in assumptions, methods, and plan provisions	(2,360)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($84,271)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$9,718	$52,504	18.51%	$6,524	$51,989	12.55%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$9,718**	**$52,504**	**18.51%**	**$6,524**	**$51,989**	**12.55%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($84,271)	($55,408)
2. Next year's Tier 1/Tier 2 UAL payment	(6,100)	(4,906)
3. Combined valuation payroll	52,504	51,989
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(11.62%)	(9.44%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.51%	12.55%
b. Tier 1/Tier 2 UAL rate	(11.62%)	(9.44%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	7.02%	3.24%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	139%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	5.70%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.11%
7. July 1, 2015 total pension rate, before adjustment	7.02%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(11.62%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(11.62%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	7.02%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	18.51%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	18.51%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	7.02%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.51%	14.72%
b. Tier 1/Tier 2 UAL rate	(11.62%)	(9.44%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	7.02%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$52,504	$52,504
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	52,504	52,504
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$52,504**	**$52,504**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59				1						1
60-64										
65-69										
70-74										
75+										
Total	0	0	0	1	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Mid-Columbia Fire And Rescue V1-801/2877
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Mid-Columbia Fire And Rescue V1-801/2877

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mid-Columbia Fire And Rescue V1-801 -- #2877

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Mid-Columbia Fire And Rescue V1-801 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mid-Columbia Fire And Rescue V1-801.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Mid-Columbia Fire And Rescue V1-801

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	24.26%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.32%	0.32%	0.32%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**25.18%**	**8.28%**	**12.38%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**25.74%**	**8.76%**	**12.86%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 60%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	24.58%	24.58%
Minimum July 1, 2015 Rate	19.66%	14.74%
Maximum July 1, 2015 Rate	29.50%	34.42%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$0	0%
12/31/2008	0	0	0	0%	0	0%
12/31/2009	0	0	0	0%	0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	4,351	7,233	2,882	60%	107,251	3%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.56%	0.48%	0.48%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Mid-Columbia Fire And Rescue V1-801

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$2,882	$0
Allocated pooled OPSRP UAL	7,559	0
Side account	0	0
Net unfunded pension actuarial accrued liability	10,441	0
Combined valuation payroll	107,251	0
Net pension UAL as a percentage of payroll	10%	0%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,250	$0

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$9,955	$0
Tier 1/Tier 2 valuation payroll	41,034	0
Tier 1/Tier 2 pension normal cost rate	24.26%	0.00%
Tier 1/ Tier 2 Actuarial accrued liability	$7,233	$0
Actuarial asset value	4,351	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,882	0
Tier 1/ Tier 2 Funded status	60%	0%
Combined valuation payroll	$107,251	$0
Tier 1/Tier 2 UAL as a percentage of payroll	3%	0%
Tier 1/Tier 2 UAL rate	0.32%	0.00%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	107,251	0
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	4,351	0
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$4,351**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$0
2. Regular employer contributions	4,722
3. Benefit payments and expenses	0
4. Adjustments[2]	(1,050)
5. Interest credited	679
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$4,351**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$9,955	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$9,955**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$104	$9,955	$9,851

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$7,233	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$7,233**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$7,233**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$9,444	$7,233	($2,211)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$7,233	$0
2. Actuarial value of assets	4,351	0
3. Unfunded accrued liability *(1. – 2.)*	2,882	0
4. Funded percentage *(2. ÷ 1.)*	60%	0%
5. Combined valuation payroll	$107,251	$0
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	3%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$2,882	$209
Total				**$2,882**	**$209**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$0
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(2,211)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	(2,211)
2. Actuarial accrued liability at December 31, 2012	7,233
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(9,444)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	0
b. Contributions for 2012[1]	4,722
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	189
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	4,911
5. Actuarial value of assets at December 31, 2012	4,351
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(560)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($10,004)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$0**
2. Expected increase	0
3. Liability (gain)/loss	9,444
4. Asset (gain)/loss	560
5. Change due to changes in assumptions, methods, and plan provisions	(2,211)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$2,882**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$9,955	$41,034	24.26%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$9,955**	**$41,034**	**24.26%**	**$0**	**$0**	**0.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$2,882	$0
2. Next year's Tier 1/Tier 2 UAL payment	209	0
3. Combined valuation payroll	107,251	0
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.19%	0.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	24.26%	N/A
b. Tier 1/Tier 2 UAL rate	0.19%	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	24.58%	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	24.58%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	24.58%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	24.26%	N/A
b. Tier 1/Tier 2 UAL rate	0.19%	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	24.58%	N/A

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$41,034	$41,034
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	41,034	41,034
OPSRP valuation payroll	0	66,217	66,217
Combined valuation payroll	**$0**	**$107,251**	**$107,251**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	1	2	0	0	0	0
Total	1	0	1	2	0	0	0	0
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**0**	**1**	**2**	**0**	**0**	**0**	**0**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49				1						1
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	1	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Mapleton Water District/2597
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Mapleton Water District/2597

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Mapleton Water District/2597

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mapleton Water District -- #2597

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Mapleton Water District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mapleton Water District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Mapleton Water District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.15%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.96%	0.96%	0.96%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.71%**	**8.92%**	**13.02%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.27%**	**9.40%**	**13.50%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 96%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	12.48%	12.48%
Minimum July 1, 2015 Rate	9.48%	6.48%
Maximum July 1, 2015 Rate	15.48%	18.48%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$148,243	$145,314	($2,929)	102%	$49,210	(6%)
12/31/2008	118,733	156,152	37,419	76%	59,350	63%
12/31/2009	138,450	170,867	32,417	81%	60,927	53%
12/31/2010	139,940	157,303	17,363	89%	69,364	25%
12/31/2011	147,113	169,350	22,237	87%	62,272	36%
12/31/2012	172,579	179,803	7,224	96%	63,361	11%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Mapleton Water District

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	$7,224	$22,237
Allocated pooled OPSRP UAL	4,466	1,063
Side account	0	0
Net unfunded pension actuarial accrued liability	11,690	23,300
Combined valuation payroll	63,361	62,272
Net pension UAL as a percentage of payroll	18%	37%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,329	$1,613

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$6,830	$6,102
Tier 1/Tier 2 valuation payroll	51,950	50,737
Tier 1/Tier 2 pension normal cost rate	13.15%	12.03%
Tier 1/ Tier 2 Actuarial accrued liability	$179,803	$169,350
Actuarial asset value	172,579	147,113
Tier 1/Tier 2 Unfunded actuarial accrued liability	7,224	22,237
Tier 1/ Tier 2 Funded status	96%	87%
Combined valuation payroll	$63,361	$62,272
Tier 1/Tier 2 UAL as a percentage of payroll	11%	36%
Tier 1/Tier 2 UAL rate	0.96%	2.95%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	63,361	62,272
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$46,284	$40,692
2. Employer reserves	101,399	82,051
3. Benefits in force reserve	24,895	24,370
4. Total market value of assets ***(1. + 2. + 3.)***	**$172,579**	**$147,113**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$147,113
2.	Regular employer contributions	6,668
3.	Benefit payments and expenses	(3,910)
4.	Adjustments[2]	3,425
5.	Interest credited	19,283
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$172,579**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	6,830	6,102
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$6,830**	**$6,102**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$5,902	$6,830	$928

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	137,850	125,028
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$137,850**	**$125,028**
Dormant Members	0	0
Retired Members and Beneficiaries	41,953	44,322
Total Actuarial Accrued Liability	**$179,803**	**$169,350**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$182,209	$179,803	($2,406)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$179,803	$169,350
2. Actuarial value of assets	172,579	147,113
3. Unfunded accrued liability *(1. – 2.)*	7,224	22,237
4. Funded percentage *(2. ÷ 1.)*	96%	87%
5. Combined valuation payroll	$63,361	$62,272
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	11%	36%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$7,224	$523
Total				**$7,224**	**$523**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$169,350
b. Normal cost at December 31, 2011	6,102
c. Benefit payments during 2012	(3,879)
d. Interest at 8.0% to December 31, 2012	13,881
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	185,454
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(2,406)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	183,048
2. Actuarial accrued liability at December 31, 2012	179,803
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	3,245
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	147,113
b. Contributions for 2012[1]	6,668
c. Benefit payments and expenses during 2012	(3,910)
d. Interest at 8.0% to December 31, 2012	11,879
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	161,751
5. Actuarial value of assets at December 31, 2012	172,579
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	10,828
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$14,073**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$22,237**
2. Expected increase	1,466
3. Liability (gain)/loss	(3,245)
4. Asset (gain)/loss	(10,828)
5. Change due to changes in assumptions, methods, and plan provisions	(2,406)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$7,224**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	6,830	51,950	13.15%	6,102	50,737	12.03%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$6,830**	**$51,950**	**13.15%**	**$6,102**	**$50,737**	**12.03%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$7,224	$22,237
2. Next year's Tier 1/Tier 2 UAL payment	523	1,758
3. Combined valuation payroll	63,361	62,272
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.83%	2.82%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.15%	12.03%
b. Tier 1/Tier 2 UAL rate	0.83%	2.82%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.11%	14.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.48%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.48%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.50%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.48%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	15.48%
7. July 1, 2015 total pension rate, before adjustment	14.11%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.83%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.83%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.11%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.15%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.15%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.11%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.15%	12.03%
b. Tier 1/Tier 2 UAL rate	0.83%	2.82%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.11%	14.98%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$51,950	$0	$51,950
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	51,950	0	51,950
OPSRP valuation payroll	11,411	0	11,411
Combined valuation payroll	**$63,361**	**$0**	**$63,361**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	1	2	1	0	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	0	1	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**2**	**0**	**1**	**3**	**2**	**0**	**1**	**3**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59				1						**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79	1	520
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	520

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Malheur County/2039
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Malheur County/2039

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Malheur County/2039

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Malheur County -- #2039

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Malheur County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Malheur County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Malheur County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.39%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.49%)	(0.49%)	(0.49%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.50%**	**7.47%**	**11.57%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.06%**	**7.95%**	**12.05%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 96%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.90%	10.90%
Minimum July 1, 2015 Rate	7.90%	4.90%
Maximum July 1, 2015 Rate	13.90%	16.90%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$34,820,023	$30,999,671	($3,820,352)	112%	$6,995,602	(55%)
12/31/2008	26,929,480	32,360,030	5,430,550	83%	7,410,989	73%
12/31/2009	30,796,030	34,090,448	3,294,418	90%	7,381,830	45%
12/31/2010	32,615,328	35,461,722	2,846,394	92%	7,631,723	37%
12/31/2011	32,516,737	37,111,809	4,595,072	88%	7,459,213	62%
12/31/2012	36,288,108	37,610,222	1,322,114	96%	7,739,628	17%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Malheur County

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	$1,322,114	$4,595,072
Allocated pooled OPSRP UAL	545,510	127,272
Side account	0	0
Net unfunded pension actuarial accrued liability	1,867,624	4,722,344
Combined valuation payroll	7,739,628	7,459,213
Net pension UAL as a percentage of payroll	24%	63%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$162,381	$193,235

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$703,885	$524,552
Tier 1/Tier 2 valuation payroll	4,891,962	4,998,362
Tier 1/Tier 2 pension normal cost rate	14.39%	10.49%
Tier 1/ Tier 2 Actuarial accrued liability	$37,610,222	$37,111,809
Actuarial asset value	36,288,108	32,516,737
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,322,114	4,595,072
Tier 1/ Tier 2 Funded status	96%	88%
Combined valuation payroll	$7,739,628	$7,459,213
Tier 1/Tier 2 UAL as a percentage of payroll	17%	62%
Tier 1/Tier 2 UAL rate	(0.49%)	3.41%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	102	107
Tier 1/Tier 2 dormant members	67	66
Tier 1/Tier 2 retirees and beneficiaries	156	151

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	7,739,628	7,459,213
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$7,283,269	$6,618,727
2. Employer reserves	19,339,861	16,732,761
3. Benefits in force reserve	9,664,979	9,165,248
4. Total market value of assets ***(1. + 2. + 3.)***	**$36,288,108**	**$32,516,737**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$32,516,737
2.	Regular employer contributions	572,896
3.	Benefit payments and expenses	(1,517,953)
4.	Adjustments[2]	442,915
5.	Interest credited	4,273,514
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$36,288,108**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$126,110	$116,937
Tier 1 General Service	231,036	68,688
Tier 2 Police & Fire	151,672	140,325
Tier 2 General Service	195,067	198,602
Total	**$703,885**	**$524,552**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$540,398	$703,885	$163,487

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$3,600,395	$3,237,749
▪ Tier 1 General Service	7,694,677	8,585,511
▪ Tier 2 Police & Fire	2,352,585	1,804,016
▪ Tier 2 General Service	3,543,166	2,748,449
▪ **Total Active Members**	**$17,190,823**	**$16,375,725**
Dormant Members	4,132,576	4,066,916
Retired Members and Beneficiaries	16,286,823	16,669,168
Total Actuarial Accrued Liability	**$37,610,222**	**$37,111,809**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$38,781,710	$37,610,222	($1,171,488)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$37,610,222	$37,111,809
2. Actuarial value of assets	36,288,108	32,516,737
3. Unfunded accrued liability *(1. – 2.)*	1,322,114	4,595,072
4. Funded percentage *(2. ÷ 1.)*	96%	88%
5. Combined valuation payroll	$7,739,628	$7,459,213
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	17%	62%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,322,114	$95,694
Total				**$1,322,114**	**$95,694**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$37,111,809
b. Normal cost at December 31, 2011	524,552
c. Benefit payments during 2012	(1,506,071)
d. Interest at 8.0% to December 31, 2012	2,950,666
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	39,080,956
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,171,488)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	37,909,468
2. Actuarial accrued liability at December 31, 2012	37,610,222
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	299,246
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	32,516,737
b. Contributions for 2012[1]	572,896
c. Benefit payments and expenses during 2012	(1,517,953)
d. Interest at 8.0% to December 31, 2012	2,563,537
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	34,135,216
5. Actuarial value of assets at December 31, 2012	36,288,108
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	2,152,892
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$2,452,138**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$4,595,072**
2. Expected increase	350,668
3. Liability (gain)/loss	(299,246)
4. Asset (gain)/loss	(2,152,892)
5. Change due to changes in assumptions, methods, and plan provisions	(1,171,488)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,322,114**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$126,110	$741,340	17.01%	$116,937	$729,710	16.03%
Tier 1 General Service	231,036	1,295,813	17.83%	68,688	1,339,595	5.13%
Tier 2 Police & Fire	151,672	938,088	16.17%	140,325	905,023	15.51%
Tier 2 General Service	195,067	1,916,721	10.18%	198,602	2,024,034	9.81%
Total	**$703,885**	**$4,891,962**	**14.39%**	**$524,552**	**$4,998,362**	**10.49%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,322,114	$4,595,072
2. Next year's Tier 1/Tier 2 UAL payment	95,694	327,336
3. Combined valuation payroll	7,739,628	7,459,213
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.24%	4.39%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.39%	10.49%
b. Tier 1/Tier 2 UAL rate	1.24%	4.39%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.76%	15.01%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.90%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.90%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.18%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.90%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.90%
7. July 1, 2015 total pension rate, before adjustment	15.76%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.86%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.24%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.62%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.90%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.39%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.39%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.90%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.39%	10.49%
b. Tier 1/Tier 2 UAL rate	(0.62%)	3.28%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.90%	13.90%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,295,813	$741,340	$2,037,153
Tier 2	1,916,721	938,088	2,854,809
Tier 1/Tier 2 valuation payroll	3,212,534	1,679,428	4,891,962
OPSRP valuation payroll	1,981,488	866,178	2,847,666
Combined valuation payroll	**$5,194,022**	**$2,545,606**	**$7,739,628**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	27	47	49	123	29	50	46	125
Police & Fire	12	16	16	44	12	16	15	43
Total	39	63	65	167	41	66	61	168
Active Members with previous service segments with the employer								
General Service	13	7	N/A	20	26	12	N/A	38
Police & Fire	6	4	N/A	10	8	6	N/A	14
Total	19	11	N/A	30	34	18	N/A	52
Dormant Members								
General Service	39	16	5	60	37	17	2	56
Police & Fire	6	6	1	13	6	6	1	13
Total	45	22	6	73	43	23	3	69
Retired Members and Beneficiaries								
General Service	114	8	0	122	109	7	0	116
Police & Fire	31	3	0	34	32	3	0	35
Total	145	11	0	156	141	10	0	151
Grand Total Number of Members	**248**	**107**	**71**	**426**	**259**	**117**	**64**	**440**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34			1							**1**
35-39		3	7	2						**12**
40-44		1	13	4	1					**19**
45-49		2	5	4	2					**13**
50-54		3	8	3	5					**19**
55-59		1	8	4	4		3			**20**
60-64		1	2	3	2				1	**9**
65-69				2	2	1			1	**6**
70-74			2							**2**
75+			1							**1**
Total	**0**	**11**	**47**	**22**	**16**	**1**	**3**	**0**	**2**	**102**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	1,354
35-39	5	678
40-44	7	697
45-49	6	1,161
50-54	11	619
55-59	10	468
60-64	14	894
65-69	7	543
70-74	3	323
75+	3	54
Total	67	679

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	1	327
45-49		
50-54	3	1,084
55-59	10	408
60-64	31	647
65-69	35	1,138
70-74	22	983
75-79	26	1,031
80-84	11	683
85-89	12	426
90-94	5	622
95-99		
100+		
Total	156	844

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Linn County/2014
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Linn County/2014

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Linn County -- #2014

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Linn County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Linn County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Linn County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.54%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	3.28%	3.28%	3.28%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.42%**	**11.24%**	**15.34%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.98%**	**11.72%**	**15.82%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 84%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.82%	14.82%
Minimum July 1, 2015 Rate	11.82%	8.82%
Maximum July 1, 2015 Rate	17.82%	20.82%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$158,689,848	$160,988,659	$2,298,811	99%	$30,341,309	8%
12/31/2008	119,192,057	165,101,630	45,909,573	72%	30,606,529	150%
12/31/2009	135,458,576	173,289,627	37,831,051	78%	32,768,668	115%
12/31/2010	145,618,230	182,831,652	37,213,422	80%	34,453,366	108%
12/31/2011	144,346,411	184,066,697	39,720,286	78%	34,012,953	117%
12/31/2012	159,362,121	189,449,664	30,087,543	84%	34,115,995	88%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Linn County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$30,087,543	$39,720,286
Allocated pooled OPSRP UAL	2,404,589	580,342
Side account	0	0
Net unfunded pension actuarial accrued liability	32,492,132	40,300,628
Combined valuation payroll	34,115,995	34,012,953
Net pension UAL as a percentage of payroll	95%	118%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$715,768	$881,123

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$3,341,731	$1,925,352
Tier 1/Tier 2 valuation payroll	22,990,030	24,059,585
Tier 1/Tier 2 pension normal cost rate	14.54%	8.00%
Tier 1/ Tier 2 Actuarial accrued liability	$189,449,664	$184,066,697
Actuarial asset value	159,362,121	144,346,411
Tier 1/Tier 2 Unfunded actuarial accrued liability	30,087,543	39,720,286
Tier 1/ Tier 2 Funded status	84%	78%
Combined valuation payroll	$34,115,995	$34,012,953
Tier 1/Tier 2 UAL as a percentage of payroll	88%	117%
Tier 1/Tier 2 UAL rate	3.28%	9.32%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	363	386
Tier 1/Tier 2 dormant members	180	174
Tier 1/Tier 2 retirees and beneficiaries	577	540

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	34,115,995	34,012,953
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$30,553,292	$29,504,875
2. Employer reserves	72,891,814	63,612,477
3. Benefits in force reserve	55,917,015	51,229,059
4. Total market value of assets ***(1. + 2. + 3.)***	**$159,362,121**	**$144,346,411**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$144,346,411
2. Regular employer contributions	4,182,963
3. Benefit payments and expenses	(8,782,164)
4. Adjustments[2]	414,405
5. Interest credited	19,200,506
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$159,362,121**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$595,719	$71,356
Tier 1 General Service	1,355,007	684,215
Tier 2 Police & Fire	503,338	48,049
Tier 2 General Service	887,667	1,121,732
Total	**$3,341,731**	**$1,925,352**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$2,452,132	$3,341,731	$889,599

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$18,267,333	$15,150,602
▪ Tier 1 General Service	38,444,601	45,769,608
▪ Tier 2 Police & Fire	8,365,055	4,453,275
▪ Tier 2 General Service	15,884,878	12,347,101
▪ **Total Active Members**	**$80,961,867**	**$77,720,586**
Dormant Members	14,259,905	13,173,970
Retired Members and Beneficiaries	94,227,892	93,172,141
Total Actuarial Accrued Liability	**$189,449,664**	**$184,066,697**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$196,666,514	$189,449,664	($7,216,850)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$189,449,664	$184,066,697
2. Actuarial value of assets	159,362,121	144,346,411
3. Unfunded accrued liability *(1. – 2.)*	30,087,543	39,720,286
4. Funded percentage *(2. ÷ 1.)*	84%	78%
5. Combined valuation payroll	$34,115,995	$34,012,953
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	88%	117%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$30,087,543	$2,177,732
Total				**$30,087,543**	**$2,177,732**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$184,066,697
b. Normal cost at December 31, 2011	1,925,352
c. Benefit payments during 2012	(8,713,418)
d. Interest at 8.0% to December 31, 2012	14,530,827
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	191,809,458
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(7,216,850)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	184,592,608
2. Actuarial accrued liability at December 31, 2012	189,449,664
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(4,857,056)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	144,346,411
b. Contributions for 2012[1]	4,182,963
c. Benefit payments and expenses during 2012	(8,782,164)
d. Interest at 8.0% to December 31, 2012	11,363,745
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	151,110,955
5. Actuarial value of assets at December 31, 2012	159,362,121
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	8,251,166
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$3,394,110**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$39,720,286**
2. Expected increase	978,217
3. Liability (gain)/loss	4,857,056
4. Asset (gain)/loss	(8,251,166)
5. Change due to changes in assumptions, methods, and plan provisions	(7,216,850)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$30,087,543**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$595,719	$3,275,079	18.19%	$71,356	$397,151	17.97%
Tier 1 General Service	1,355,007	8,602,774	15.75%	684,215	12,077,948	5.66%
Tier 2 Police & Fire	503,338	3,146,158	16.00%	48,049	295,356	16.27%
Tier 2 General Service	887,667	7,966,019	11.14%	1,121,732	11,289,130	9.94%
Total	**$3,341,731**	**$22,990,030**	**14.54%**	**$1,925,352**	**$24,059,585**	**8.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$30,087,543	$39,720,286
2. Next year's Tier 1/Tier 2 UAL payment	2,177,732	3,125,376
3. Combined valuation payroll	34,115,995	34,012,953
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.38%	9.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.54%	8.00%
b. Tier 1/Tier 2 UAL rate	6.38%	9.19%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	21.05%	17.32%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.82%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.82%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.96%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	84%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.82%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.82%
7. July 1, 2015 total pension rate, before adjustment	21.05%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.23%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.38%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.15%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.82%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.54%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.54%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.82%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.54%	8.00%
b. Tier 1/Tier 2 UAL rate	3.15%	9.19%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.82%	17.32%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$8,602,774	$3,275,079	$11,877,853
Tier 2	7,966,019	3,146,158	11,112,177
Tier 1/Tier 2 valuation payroll	16,568,793	6,421,237	22,990,030
OPSRP valuation payroll	9,065,779	2,060,186	11,125,965
Combined valuation payroll	**$25,634,572**	**$8,481,423**	**$34,115,995**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	136	142	207	485	183	193	193	569
Police & Fire	42	43	31	116	5	5	32	42
Total	178	185	238	601	188	198	225	611
Active Members with previous service segments with the employer								
General Service	63	63	N/A	126	110	101	N/A	211
Police & Fire	15	5	N/A	20	26	14	N/A	40
Total	78	68	N/A	146	136	115	N/A	251
Dormant Members								
General Service	77	84	17	178	78	79	9	166
Police & Fire	12	7	0	19	13	4	0	17
Total	89	91	17	197	91	83	9	183
Retired Members and Beneficiaries								
General Service	425	43	2	470	400	33	1	434
Police & Fire	103	6	1	110	102	5	0	107
Total	528	49	3	580	502	38	1	541
Grand Total Number of Members	**873**	**393**	**258**	**1,524**	**917**	**434**	**235**	**1,586**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29		2								**2**
30-34		5	5							**10**
35-39		7	21	5						**33**
40-44		4	26	24	1					**55**
45-49		4	20	18	17	1				**60**
50-54		4	12	11	15	11	1			**54**
55-59		2	20	20	16	7	3	1		**69**
60-64		4	15	18	14	5	6	1		**63**
65-69			4	5	2	2	1			**14**
70-74					2					**2**
75+					1					**1**
Total	**0**	**32**	**123**	**101**	**68**	**26**	**11**	**2**	**0**	**363**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29	1	218
30-34	6	397
35-39	14	652
40-44	20	646
45-49	20	1,103
50-54	41	820
55-59	40	1,046
60-64	22	1,055
65-69	13	972
70-74		
75+	3	854
Total	180	892

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	1	2,315
45-49	2	1,535
50-54	12	1,618
55-59	44	1,915
60-64	108	1,385
65-69	148	1,200
70-74	102	1,278
75-79	73	818
80-84	38	1,263
85-89	30	1,020
90-94	14	1,032
95-99	5	653
100+		
Total	577	1,252

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

League of Oregon Cities/2521
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
League of Oregon Cities/2521

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
League of Oregon Cities/2521

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

League of Oregon Cities -- #2521

Secondary Employers

2693	City-County Insurance Services
2738	Employes Benefit Services Trust

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for League of Oregon Cities to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to League of Oregon Cities.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for League of Oregon Cities

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	10.90%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	2.69%	2.69%	2.69%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.19%**	**10.65%**	**14.75%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.75%**	**11.13%**	**15.23%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 81%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.59%	10.59%
Minimum July 1, 2015 Rate	7.59%	4.59%
Maximum July 1, 2015 Rate	13.59%	16.59%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$13,393,336	$12,922,544	($470,792)	104%	$5,328,280	(9%)
12/31/2008	10,276,038	13,452,837	3,176,799	76%	5,309,971	60%
12/31/2009	11,310,015	14,190,669	2,880,654	80%	5,344,096	54%
12/31/2010	12,001,208	14,979,241	2,978,033	80%	5,910,498	50%
12/31/2011	11,873,512	15,628,011	3,754,499	76%	6,154,733	61%
12/31/2012	12,998,627	16,022,753	3,024,126	81%	6,322,166	48%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

League of Oregon Cities

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$3,024,126	$3,754,499
Allocated pooled OPSRP UAL	445,604	105,014
Side account	0	0
Net unfunded pension actuarial accrued liability	3,469,730	3,859,513
Combined valuation payroll	6,322,166	6,154,733
Net pension UAL as a percentage of payroll	55%	63%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$132,642	$159,441

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$324,585	$302,620
Tier 1/Tier 2 valuation payroll	2,978,937	3,074,735
Tier 1/Tier 2 pension normal cost rate	10.90%	9.84%
Tier 1/ Tier 2 Actuarial accrued liability	$16,022,753	$15,628,011
Actuarial asset value	12,998,627	11,873,512
Tier 1/Tier 2 Unfunded actuarial accrued liability	3,024,126	3,754,499
Tier 1/ Tier 2 Funded status	81%	76%
Combined valuation payroll	$6,322,166	$6,154,733
Tier 1/Tier 2 UAL as a percentage of payroll	48%	61%
Tier 1/Tier 2 UAL rate	2.69%	4.80%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	30	32
Tier 1/Tier 2 dormant members	13	12
Tier 1/Tier 2 retirees and beneficiaries	37	36

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	6,322,166	6,154,733
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,808,161	$1,910,020
2. Employer reserves	5,741,345	5,016,837
3. Benefits in force reserve	5,449,121	4,946,655
4. Total market value of assets ***(1. + 2. + 3.)***	**$12,998,627**	**$11,873,512**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$11,873,512
2.	Regular employer contributions	383,216
3.	Benefit payments and expenses	(855,823)
4.	Adjustments[2]	(3,690)
5.	Interest credited	1,601,413
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$12,998,627**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	151,726	133,380
Tier 2 Police & Fire	0	0
Tier 2 General Service	172,859	169,240
Total	**$324,585**	**$302,620**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$306,523	$324,585	$18,062

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	3,347,966	4,110,792
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	2,401,289	1,802,221
▪ **Total Active Members**	**$5,749,255**	**$5,913,013**
Dormant Members	1,090,976	718,338
Retired Members and Beneficiaries	9,182,522	8,996,660
Total Actuarial Accrued Liability	**$16,022,753**	**$15,628,011**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$16,430,438	$16,022,753	($407,685)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$16,022,753	$15,628,011
2. Actuarial value of assets	12,998,627	11,873,512
3. Unfunded accrued liability *(1. – 2.)*	3,024,126	3,754,499
4. Funded percentage *(2. ÷ 1.)*	81%	76%
5. Combined valuation payroll	$6,322,166	$6,154,733
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	48%	61%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$3,024,126	$218,886
Total				**$3,024,126**	**$218,886**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$15,628,011
b. Normal cost at December 31, 2011	302,620
c. Benefit payments during 2012	(849,124)
d. Interest at 8.0% to December 31, 2012	1,240,486
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	16,321,993
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(407,685)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	15,914,308
2. Actuarial accrued liability at December 31, 2012	16,022,753
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(108,445)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	11,873,512
b. Contributions for 2012[1]	383,216
c. Benefit payments and expenses during 2012	(855,823)
d. Interest at 8.0% to December 31, 2012	930,977
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	12,331,881
5. Actuarial value of assets at December 31, 2012	12,998,627
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	666,746
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$558,301**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$3,754,499**
2. Expected increase	235,613
3. Liability (gain)/loss	108,445
4. Asset (gain)/loss	(666,746)
5. Change due to changes in assumptions, methods, and plan provisions	(407,685)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$3,024,126**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	151,726	1,283,563	11.82%	133,380	1,453,833	9.17%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	172,859	1,695,374	10.20%	169,240	1,620,902	10.44%
Total	**$324,585**	**$2,978,937**	**10.90%**	**$302,620**	**$3,074,735**	**9.84%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$3,024,126	$3,754,499
2. Next year's Tier 1/Tier 2 UAL payment	218,886	287,439
3. Combined valuation payroll	6,322,166	6,154,733
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.46%	4.67%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.90%	9.84%
b. Tier 1/Tier 2 UAL rate	3.46%	4.67%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.49%	14.64%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.59%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.59%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.12%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	81%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.59%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.59%
7. July 1, 2015 total pension rate, before adjustment	14.49%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.90%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	3.46%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.56%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.59%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	10.90%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	10.90%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.59%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.90%	9.84%
b. Tier 1/Tier 2 UAL rate	2.56%	4.67%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.59%	14.64%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,283,563	$0	$1,283,563
Tier 2	1,695,374	0	1,695,374
Tier 1/Tier 2 valuation payroll	2,978,937	0	2,978,937
OPSRP valuation payroll	3,343,229	0	3,343,229
Combined valuation payroll	**$6,322,166**	**$0**	**$6,322,166**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	12	18	45	75	14	18	42	74
Police & Fire	0	0	0	0	0	0	0	0
Total	12	18	45	75	14	18	42	74
Active Members with previous service segments with the employer								
General Service	3	1	N/A	4	8	6	N/A	14
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	3	1	N/A	4	8	6	N/A	14
Dormant Members								
General Service	6	7	4	17	5	7	3	15
Police & Fire	0	0	0	0	0	0	0	0
Total	6	7	4	17	5	7	3	15
Retired Members and Beneficiaries								
General Service	35	2	3	40	34	2	2	38
Police & Fire	0	0	0	0	0	0	0	0
Total	35	2	3	40	34	2	2	38
Grand Total Number of Members	**56**	**28**	**52**	**136**	**61**	**33**	**47**	**141**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29		1								1
30-34										
35-39		2	2							4
40-44		1	3							4
45-49		1	1	1	1					4
50-54			2	2	1	2				7
55-59		1	1	1			1			4
60-64			3	1						4
65-69				1	1					2
70-74										
75+										
Total	0	6	12	6	3	2	1	0	0	30

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	1,338
35-39	2	1,757
40-44	3	778
45-49	1	679
50-54	2	1,184
55-59	2	1,680
60-64	2	512
65-69		
70-74		
75+		
Total	13	1,124

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	3	1,249
60-64	7	1,547
65-69	13	2,567
70-74	7	1,648
75-79	3	384
80-84	3	3,033
85-89	1	631
90-94		
95-99		
100+		
Total	37	1,902

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Lane Rural Fire/Rescue/2565
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Lane Rural Fire/Rescue/2565

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Lane Rural Fire/Rescue/2565

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Lane Rural Fire/Rescue -- #2565

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Lane Rural Fire/Rescue to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lane Rural Fire/Rescue.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Lane Rural Fire/Rescue

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.58%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	3.58%	3.58%	3.58%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**19.76%**	**11.54%**	**15.64%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**20.32%**	**12.02%**	**16.12%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 79%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	15.97%	15.97%
Minimum July 1, 2015 Rate	12.78%	9.59%
Maximum July 1, 2015 Rate	19.16%	22.35%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$3,488,261	$3,225,357	($262,904)	108%	$788,728	(33%)
12/31/2008	2,682,464	3,523,653	841,189	76%	946,366	89%
12/31/2009	3,129,983	3,458,015	328,032	91%	1,085,815	30%
12/31/2010	3,311,438	3,901,454	590,016	85%	1,125,139	52%
12/31/2011	3,105,359	4,185,309	1,079,950	74%	1,179,480	92%
12/31/2012	3,429,466	4,337,248	907,782	79%	1,348,455	67%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Lane Rural Fire/Rescue

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$907,782	$1,079,950
Allocated pooled OPSRP UAL	95,043	20,125
Side account	0	0
Net unfunded pension actuarial accrued liability	1,002,825	1,100,075
Combined valuation payroll	1,348,455	1,179,480
Net pension UAL as a percentage of payroll	74%	93%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$28,291	$30,555

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$87,784	$78,618
Tier 1/Tier 2 valuation payroll	563,614	566,825
Tier 1/Tier 2 pension normal cost rate	15.58%	13.87%
Tier 1/ Tier 2 Actuarial accrued liability	$4,337,248	$4,185,309
Actuarial asset value	3,429,466	3,105,359
Tier 1/Tier 2 Unfunded actuarial accrued liability	907,782	1,079,950
Tier 1/ Tier 2 Funded status	79%	74%
Combined valuation payroll	$1,348,455	$1,179,480
Tier 1/Tier 2 UAL as a percentage of payroll	67%	92%
Tier 1/Tier 2 UAL rate	3.58%	6.50%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	7	7
Tier 1/Tier 2 dormant members	1	2
Tier 1/Tier 2 retirees and beneficiaries	11	10

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,348,455	1,179,480
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$92,263	$137,107
2. Employer reserves	1,548,133	1,323,239
3. Benefits in force reserve	1,789,070	1,645,013
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,429,466**	**$3,105,359**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$3,105,359
2.	Regular employer contributions	115,909
3.	Benefit payments and expenses	(280,986)
4.	Adjustments[2]	52,340
5.	Interest credited	436,843
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,429,466**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$38,810	$33,676
Tier 1 General Service	765	0
Tier 2 Police & Fire	48,209	44,942
Tier 2 General Service	0	0
Total	**$87,784**	**$78,618**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$78,941	$87,784	$8,843

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$586,167	$478,996
▪ Tier 1 General Service	968	0
▪ Tier 2 Police & Fire	709,191	538,497
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$1,296,326**	**$1,017,493**
Dormant Members	26,093	175,971
Retired Members and Beneficiaries	3,014,829	2,991,845
Total Actuarial Accrued Liability	**$4,337,248**	**$4,185,309**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$4,359,941	$4,337,248	($22,693)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$4,337,248	$4,185,309
2. Actuarial value of assets	3,429,466	3,105,359
3. Unfunded accrued liability *(1. – 2.)*	907,782	1,079,950
4. Funded percentage *(2. ÷ 1.)*	79%	74%
5. Combined valuation payroll	$1,348,455	$1,179,480
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	67%	92%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$907,782	$65,705
Total				**$907,782**	**$65,705**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$4,185,309
b. Normal cost at December 31, 2011	78,618
c. Benefit payments during 2012	(278,787)
d. Interest at 8.0% to December 31, 2012	329,963
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	4,315,103
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(22,693)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	4,292,410
2. Actuarial accrued liability at December 31, 2012	4,337,248
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(44,838)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	3,105,359
b. Contributions for 2012[1]	115,909
c. Benefit payments and expenses during 2012	(280,986)
d. Interest at 8.0% to December 31, 2012	241,826
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,182,108
5. Actuarial value of assets at December 31, 2012	3,429,466
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	247,358
7. Total actuarial gain/(loss) *(3. + 6.)*	**$202,520**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,079,950**
2. Expected increase	53,045
3. Liability (gain)/loss	44,838
4. Asset (gain)/loss	(247,358)
5. Change due to changes in assumptions, methods, and plan provisions	(22,693)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$907,782**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$38,810	$249,216	15.57%	$33,676	$255,662	13.17%
Tier 1 General Service	765	2,851	26.83%	0	0	0.00%
Tier 2 Police & Fire	48,209	311,547	15.47%	44,942	311,163	14.44%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$87,784**	**$563,614**	**15.58%**	**$78,618**	**$566,825**	**13.87%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$907,782	$1,079,950
2. Next year's Tier 1/Tier 2 UAL payment	65,705	79,241
3. Combined valuation payroll	1,348,455	1,179,480
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.87%	6.72%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.58%	13.87%
b. Tier 1/Tier 2 UAL rate	4.87%	6.72%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.58%	20.72%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	15.97%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.97%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.19%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.19%
c. Funded percentage	79%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.19%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.78%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	19.16%
7. July 1, 2015 total pension rate, before adjustment	20.58%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.42%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.87%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.45%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	19.16%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.58%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.58%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	19.16%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.58%	13.87%
b. Tier 1/Tier 2 UAL rate	3.45%	6.37%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	19.16%	20.37%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$2,851	$249,216	$252,067
Tier 2	0	311,547	311,547
Tier 1/Tier 2 valuation payroll	2,851	560,763	563,614
OPSRP valuation payroll	38,782	746,059	784,841
Combined valuation payroll	**$41,633**	**$1,306,822**	**$1,348,455**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	3	4	10	17	3	4	7	14
Total	3	4	11	18	3	4	8	15
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	1	N/A	1
Total	1	0	N/A	1	0	1	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	1	1	0	2
Total	0	1	0	1	1	1	0	2
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	9	0	0	9	8	0	0	8
Total	11	0	0	11	10	0	0	10
Grand Total Number of Members	**15**	**5**	**11**	**31**	**14**	**6**	**8**	**28**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							1
40-44			1							1
45-49			1	1						2
50-54			1		1					2
55-59					1					1
60-64										
65-69										
70-74										
75+										
Total	0	0	4	1	2	0	0	0	0	7

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	460
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	460

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	2,091
60-64	3	1,132
65-69	4	2,691
70-74	1	792
75-79		
80-84	1	1,143
85-89		
90-94		
95-99		
100+		
Total	11	1,843

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Lane County/2008
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Lane County/2008

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Lane County/2008

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Lane County -- #2008

Secondary Employers

2047 Lane County Fair Board

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Lane County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lane County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Lane County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.91%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.06%	0.06%	0.06%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.57%**	**8.02%**	**12.12%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.13%**	**8.50%**	**12.60%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 90%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.97%	10.97%
Minimum July 1, 2015 Rate	7.97%	4.97%
Maximum July 1, 2015 Rate	13.97%	16.97%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$612,335,125	$550,459,256	($61,875,869)	111%	$74,343,062	(83%)
12/31/2008	446,608,724	559,238,374	112,629,650	80%	73,699,021	153%
12/31/2009	500,408,457	583,156,954	82,748,497	86%	76,335,867	108%
12/31/2010	530,061,782	608,521,838	78,460,056	87%	82,587,626	95%
12/31/2011	511,461,459	623,549,175	112,087,716	82%	81,017,355	138%
12/31/2012	550,497,247	610,507,495	60,010,248	90%	75,072,561	80%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Lane County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$60,010,248	$112,087,716
Allocated pooled OPSRP UAL	5,291,321	1,382,348
Side account	0	0
Net unfunded pension actuarial accrued liability	65,301,569	113,470,064
Combined valuation payroll	75,072,561	81,017,355
Net pension UAL as a percentage of payroll	87%	140%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,575,054	$2,098,795

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$6,851,447	$5,145,404
Tier 1/Tier 2 valuation payroll	49,255,083	55,214,607
Tier 1/Tier 2 pension normal cost rate	13.91%	9.32%
Tier 1/ Tier 2 Actuarial accrued liability	$610,507,495	$623,549,175
Actuarial asset value	550,497,247	511,461,459
Tier 1/Tier 2 Unfunded actuarial accrued liability	60,010,248	112,087,716
Tier 1/ Tier 2 Funded status	90%	82%
Combined valuation payroll	$75,072,561	$81,017,355
Tier 1/Tier 2 UAL as a percentage of payroll	80%	138%
Tier 1/Tier 2 UAL rate	0.06%	4.65%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	727	829
Tier 1/Tier 2 dormant members	386	371
Tier 1/Tier 2 retirees and beneficiaries	1,840	1,702

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	75,072,561	81,017,355
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$67,549,605	$68,758,738
2. Employer reserves	239,297,199	219,206,968
3. Benefits in force reserve	243,650,443	223,495,753
4. Total market value of assets ***(1. + 2. + 3.)***	**$550,497,247**	**$511,461,459**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$511,461,459
2.	Regular employer contributions	6,617,531
3.	Benefit payments and expenses	(38,267,030)
4.	Adjustments [2]	3,101,953
5.	Interest credited	67,583,334
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$550,497,247**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$951,258	$810,625
Tier 1 General Service	2,760,006	1,002,178
Tier 2 Police & Fire	1,173,218	1,237,216
Tier 2 General Service	1,966,965	2,095,385
Total	**$6,851,447**	**$5,145,404**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,846,272	$6,851,447	$2,005,175

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$27,048,891	$30,245,515
▪ Tier 1 General Service	78,387,965	103,682,039
▪ Tier 2 Police & Fire	19,263,308	15,914,230
▪ Tier 2 General Service	34,996,713	28,006,780
▪ **Total Active Members**	**$159,696,877**	**$177,848,564**
Dormant Members	40,225,976	39,220,810
Retired Members and Beneficiaries	410,584,642	406,479,801
Total Actuarial Accrued Liability	**$610,507,495**	**$623,549,175**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$644,536,909	$610,507,495	($34,029,414)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$610,507,495	$623,549,175
2. Actuarial value of assets	550,497,247	511,461,459
3. Unfunded accrued liability *(1. – 2.)*	60,010,248	112,087,716
4. Funded percentage *(2. ÷ 1.)*	90%	82%
5. Combined valuation payroll	$75,072,561	$81,017,355
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	80%	138%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$60,010,248	$4,343,533
Total				**$60,010,248**	**$4,343,533**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$623,549,175
b. Normal cost at December 31, 2011	5,145,404
c. Benefit payments during 2012	(37,967,479)
d. Interest at 8.0% to December 31, 2012	48,776,867
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	639,503,967
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(34,029,414)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	605,474,553
2. Actuarial accrued liability at December 31, 2012	610,507,495
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(5,032,942)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	511,461,459
b. Contributions for 2012[1]	6,617,531
c. Benefit payments and expenses during 2012	(38,267,030)
d. Interest at 8.0% to December 31, 2012	39,650,937
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	519,462,897
5. Actuarial value of assets at December 31, 2012	550,497,247
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	31,034,350
7. Total actuarial gain/(loss) *(3. + 6.)*	**$26,001,408**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$112,087,716**
2. Expected increase	7,953,354
3. Liability (gain)/loss	5,032,942
4. Asset (gain)/loss	(31,034,350)
5. Change due to changes in assumptions, methods, and plan provisions	(34,029,414)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$60,010,248**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$951,258	$5,307,131	17.92%	$810,625	$6,209,688	13.05%
Tier 1 General Service	2,760,006	17,679,664	15.61%	1,002,178	21,036,895	4.76%
Tier 2 Police & Fire	1,173,218	7,861,900	14.92%	1,237,216	8,558,517	14.46%
Tier 2 General Service	1,966,965	18,406,388	10.69%	2,095,385	19,409,507	10.80%
Total	**$6,851,447**	**$49,255,083**	**13.91%**	**$5,145,404**	**$55,214,607**	**9.32%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$60,010,248	$112,087,716
2. Next year's Tier 1/Tier 2 UAL payment	4,343,533	8,181,271
3. Combined valuation payroll	75,072,561	81,017,355
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.79%	10.10%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.91%	9.32%
b. Tier 1/Tier 2 UAL rate	5.79%	10.10%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.83%	19.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.97%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.97%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.19%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	90%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.97%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.97%
7. July 1, 2015 total pension rate, before adjustment	19.83%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.86%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	5.79%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.07%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.97%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.91%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.91%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.97%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.91%	9.32%
b. Tier 1/Tier 2 UAL rate	(0.07%)	4.52%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.97%	13.97%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$17,679,664	$5,307,131	$22,986,795
Tier 2	18,406,388	7,861,900	26,268,288
Tier 1/Tier 2 valuation payroll	36,086,052	13,169,031	49,255,083
OPSRP valuation payroll	24,023,900	1,793,578	25,817,478
Combined valuation payroll	**$60,109,952**	**$14,962,609**	**$75,072,561**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	255	310	471	1,036	314	333	474	1,121
Police & Fire	61	101	28	190	71	111	52	234
Total	316	411	499	1,226	385	444	526	1,355
Active Members with previous service segments with the employer								
General Service	137	102	N/A	239	192	124	N/A	316
Police & Fire	13	28	N/A	41	20	31	N/A	51
Total	150	130	N/A	280	212	155	N/A	367
Dormant Members								
General Service	211	147	34	392	212	133	23	368
Police & Fire	15	13	9	37	14	12	2	28
Total	226	160	43	429	226	145	25	396
Retired Members and Beneficiaries								
General Service	1,493	88	11	1,592	1,390	71	8	1,469
Police & Fire	242	17	1	260	228	13	0	241
Total	1,735	105	12	1,852	1,618	84	8	1,710
Grand Total Number of Members	**2,427**	**806**	**554**	**3,787**	**2,441**	**828**	**559**	**3,828**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		7	7							**14**
35-39		10	51	7						**68**
40-44		11	65	20	4					**100**
45-49		7	43	27	34	3				**114**
50-54		7	60	26	32	29	2			**156**
55-59		5	53	33	42	23	7	1		**164**
60-64		3	24	30	14	11	4	1		**87**
65-69		1	6	8	3	1		1		**20**
70-74		2	2							**4**
75+										
Total	**0**	**53**	**311**	**151**	**129**	**67**	**13**	**3**	**0**	**727**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	8	173
35-39	16	829
40-44	44	804
45-49	49	1,564
50-54	63	1,292
55-59	91	1,095
60-64	67	1,099
65-69	31	1,395
70-74	4	1,361
75+	13	341
Total	386	1,125

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	11	1,639
45-49	10	2,345
50-54	31	1,774
55-59	149	1,945
60-64	444	1,909
65-69	457	1,829
70-74	306	1,634
75-79	192	1,366
80-84	115	1,166
85-89	75	1,037
90-94	34	596
95-99	15	395
100+	1	1,767
Total	1,840	1,670

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Lakeside Water District/2644
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Lakeside Water District/2644

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The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Lakeside Water District -- #2644

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Lakeside Water District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lakeside Water District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Lakeside Water District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	9.89%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.13%	4.13%	4.13%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.62%**	**12.09%**	**16.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.18%**	**12.57%**	**16.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 85%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.31%	13.31%
Minimum July 1, 2015 Rate	10.31%	7.31%
Maximum July 1, 2015 Rate	16.31%	19.31%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$589,246	$587,300	($1,946)	100%	$126,102	(2%)
12/31/2008	409,070	584,065	174,995	70%	125,013	140%
12/31/2009	460,495	583,881	123,386	79%	88,065	140%
12/31/2010	486,366	620,803	134,437	78%	113,608	118%
12/31/2011	476,386	632,094	155,708	75%	148,317	105%
12/31/2012	489,340	572,638	83,298	85%	150,540	55%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Lakeside Water District

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	$83,298	$155,708
Allocated pooled OPSRP UAL	10,610	2,531
Side account	0	0
Net unfunded pension actuarial accrued liability	93,908	158,239
Combined valuation payroll	150,540	148,317
Net pension UAL as a percentage of payroll	62%	107%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,158	$3,842

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$7,234	$7,682
Tier 1/Tier 2 valuation payroll	73,109	77,480
Tier 1/Tier 2 pension normal cost rate	9.89%	9.91%
Tier 1/ Tier 2 Actuarial accrued liability	$572,638	$632,094
Actuarial asset value	489,340	476,386
Tier 1/Tier 2 Unfunded actuarial accrued liability	83,298	155,708
Tier 1/ Tier 2 Funded status	85%	75%
Combined valuation payroll	$150,540	$148,317
Tier 1/Tier 2 UAL as a percentage of payroll	55%	105%
Tier 1/Tier 2 UAL rate	4.13%	7.80%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	3	3
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	150,540	148,317
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$48,954	$42,145
2. Employer reserves	228,978	186,848
3. Benefits in force reserve	211,408	247,393
4. Total market value of assets ***(1. + 2. + 3.)***	**$489,340**	**$476,386**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$476,386
2. Regular employer contributions	13,496
3. Benefit payments and expenses	(33,203)
4. Adjustments[2]	(29,564)
5. Interest credited	62,224
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$489,340**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	7,234	7,682
Total	**$7,234**	**$7,682**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$7,464	$7,234	($230)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	139,907	110,893
▪ **Total Active Members**	**$139,907**	**$110,893**
Dormant Members	76,479	71,259
Retired Members and Beneficiaries	356,252	449,942
Total Actuarial Accrued Liability	**$572,638**	**$632,094**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$575,740	$572,638	($3,102)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$572,638	$632,094
2. Actuarial value of assets	489,340	476,386
3. Unfunded accrued liability *(1. – 2.)*	83,298	155,708
4. Funded percentage *(2. ÷ 1.)*	85%	75%
5. Combined valuation payroll	$150,540	$148,317
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	55%	105%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$83,298	$6,029
Total				**$83,298**	**$6,029**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$632,094
b. Normal cost at December 31, 2011	7,682
c. Benefit payments during 2012	(32,943)
d. Interest at 8.0% to December 31, 2012	49,864
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	656,697
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(3,102)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	653,595
2. Actuarial accrued liability at December 31, 2012	572,638
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	80,957
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	476,386
b. Contributions for 2012[1]	13,496
c. Benefit payments and expenses during 2012	(33,203)
d. Interest at 8.0% to December 31, 2012	37,323
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	494,002
5. Actuarial value of assets at December 31, 2012	489,340
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(4,662)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$76,295**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$155,708**
2. Expected increase	6,987
3. Liability (gain)/loss	(80,957)
4. Asset (gain)/loss	4,662
5. Change due to changes in assumptions, methods, and plan provisions	(3,102)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$83,298**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	7,234	73,109	9.89%	7,682	77,480	9.91%
Total	**$7,234**	**$73,109**	**9.89%**	**$7,682**	**$77,480**	**9.91%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$83,298	$155,708
2. Next year's Tier 1/Tier 2 UAL payment	6,029	11,969
3. Combined valuation payroll	150,540	148,317
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.00%	8.07%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.89%	9.91%
b. Tier 1/Tier 2 UAL rate	4.00%	8.07%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.02%	18.11%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.31%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.31%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.66%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	85%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.31%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.31%
7. July 1, 2015 total pension rate, before adjustment	14.02%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.00%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.00%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.02%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	9.89%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	9.89%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.02%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.89%	9.91%
b. Tier 1/Tier 2 UAL rate	4.00%	7.67%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.02%	17.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	73,109	0	73,109
Tier 1/Tier 2 valuation payroll	73,109	0	73,109
OPSRP valuation payroll	77,431	0	77,431
Combined valuation payroll	**$150,540**	**$0**	**$150,540**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	2	3	0	1	2	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	2	3	0	1	2	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	1	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	1	N/A	1
Dormant Members								
General Service	0	3	0	3	0	3	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	3	0	3
Retired Members and Beneficiaries								
General Service	5	0	0	5	5	0	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**5**	**4**	**2**	**11**	**5**	**5**	**2**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49			1							1
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	1	0	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	1,240
50-54		
55-59	2	4
60-64		
65-69		
70-74		
75+		
Total	3	416

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	151
65-69	2	439
70-74	1	407
75-79	1	1,200
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	527

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Knappa Svensen Burnside Rural Fire Protection District/2760
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Knappa Svensen Burnside Rural Fire Protection District/2760

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Knappa Svensen Burnside Rural Fire Protection District -- #2760

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Knappa Svensen Burnside Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Knappa Svensen Burnside Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Knappa Svensen Burnside Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.44%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(6.08%)	(6.08%)	(6.08%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.96%**	**1.88%**	**5.98%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.52%**	**2.36%**	**6.46%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 102%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.36%	8.36%
Minimum July 1, 2015 Rate	5.36%	2.36%
Maximum July 1, 2015 Rate	11.36%	14.36%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$282,820	$179,735	($103,085)	157%	$65,613	(157%)
12/31/2008	239,076	258,258	19,182	93%	67,070	29%
12/31/2009	281,947	266,881	(15,066)	106%	71,483	(21%)
12/31/2010	314,770	288,809	(25,961)	109%	72,007	(36%)
12/31/2011	331,085	326,025	(5,060)	102%	78,399	(6%)
12/31/2012	385,794	376,481	(9,313)	102%	83,896	(11%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Knappa Svensen Burnside Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($9,313)	($5,060)
Allocated pooled OPSRP UAL	5,913	1,338
Side account	0	0
Net unfunded pension actuarial accrued liability	(3,400)	(3,722)
Combined valuation payroll	83,896	78,399
Net pension UAL as a percentage of payroll	(4%)	(5%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,760	$2,031

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$14,630	$9,770
Tier 1/Tier 2 valuation payroll	83,896	78,399
Tier 1/Tier 2 pension normal cost rate	17.44%	12.46%
Tier 1/ Tier 2 Actuarial accrued liability	$376,481	$326,025
Actuarial asset value	385,794	331,085
Tier 1/Tier 2 Unfunded actuarial accrued liability	(9,313)	(5,060)
Tier 1/ Tier 2 Funded status	102%	102%
Combined valuation payroll	$83,896	$78,399
Tier 1/Tier 2 UAL as a percentage of payroll	(11%)	(6%)
Tier 1/Tier 2 UAL rate	(6.08%)	(1.60%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	83,896	78,399
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$115,591	$101,625
2. Employer reserves	270,203	229,460
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$385,794**	**$331,085**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$331,085
2.	Regular employer contributions	6,883
3.	Benefit payments and expenses	0
4.	Adjustments[2]	5,430
5.	Interest credited	42,396
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$385,794**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$14,630	$9,770
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$14,630**	**$9,770**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$11,089	$14,630	$3,541

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$376,481	$326,025
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$376,481**	**$326,025**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$376,481**	**$326,025**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$378,063	$376,481	($1,582)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$376,481	$326,025
2. Actuarial value of assets	385,794	331,085
3. Unfunded accrued liability *(1. – 2.)*	(9,313)	(5,060)
4. Funded percentage *(2. ÷ 1.)*	102%	102%
5. Combined valuation payroll	$83,896	$78,399
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(11%)	(6%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($9,313)	($674)
Total				**($9,313)**	**($674)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$326,025
b. Normal cost at December 31, 2011	9,770
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	26,864
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	362,659
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,582)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	361,077
2. Actuarial accrued liability at December 31, 2012	376,481
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(15,404)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	331,085
b. Contributions for 2012[1]	6,883
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	26,762
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	364,730
5. Actuarial value of assets at December 31, 2012	385,794
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	21,064
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$5,660**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($5,060)**
2. Expected increase	2,989
3. Liability (gain)/loss	15,404
4. Asset (gain)/loss	(21,064)
5. Change due to changes in assumptions, methods, and plan provisions	(1,582)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($9,313)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$14,630	$83,896	17.44%	$9,770	$78,399	12.46%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$14,630**	**$83,896**	**17.44%**	**$9,770**	**$78,399**	**12.46%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($9,313)	($5,060)
2. Next year's Tier 1/Tier 2 UAL payment	(674)	(1,358)
3. Combined valuation payroll	83,896	78,399
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.80%)	(1.73%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.44%	12.46%
b. Tier 1/Tier 2 UAL rate	(0.80%)	(1.73%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.77%	10.86%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.36%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.36%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.67%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	102%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.36%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.36%
7. July 1, 2015 total pension rate, before adjustment	16.77%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.41%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(0.80%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(6.21%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.36%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.44%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.44%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.36%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.44%	12.46%
b. Tier 1/Tier 2 UAL rate	(6.21%)	(1.73%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.36%	10.86%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$83,896	$83,896
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	83,896	83,896
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$83,896**	**$83,896**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59					1					1
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	1	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Klamath County Fire District #1/2515
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Klamath County Fire District #1/2515

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Klamath County Fire District #1/2515

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES
RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Klamath County Fire District #1 -- #2515

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Klamath County Fire District #1 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Klamath County Fire District #1.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Klamath County Fire District #1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.04%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.26%	4.26%	4.26%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**21.90%**	**12.22%**	**16.32%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**22.46%**	**12.70%**	**16.80%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 81%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	17.75%	17.75%
Minimum July 1, 2015 Rate	14.20%	10.65%
Maximum July 1, 2015 Rate	21.30%	24.85%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$29,559,611	$28,714,199	($845,412)	103%	$5,538,019	(15%)
12/31/2008	23,454,496	30,574,334	7,119,838	77%	5,670,098	126%
12/31/2009	26,521,815	33,357,196	6,835,381	80%	5,647,736	121%
12/31/2010	28,009,421	33,417,879	5,408,458	84%	5,205,087	104%
12/31/2011	27,401,974	35,883,765	8,481,791	76%	5,209,949	163%
12/31/2012	30,046,017	37,192,655	7,146,638	81%	5,617,966	127%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Klamath County Fire District #1

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$7,146,638	$8,481,791
Allocated pooled OPSRP UAL	395,970	88,894
Side account	0	0
Net unfunded pension actuarial accrued liability	7,542,608	8,570,685
Combined valuation payroll	5,617,966	5,209,949
Net pension UAL as a percentage of payroll	134%	165%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$117,867	$134,966

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$574,776	$525,161
Tier 1/Tier 2 valuation payroll	3,373,668	3,206,251
Tier 1/Tier 2 pension normal cost rate	17.04%	16.38%
Tier 1/ Tier 2 Actuarial accrued liability	$37,192,655	$35,883,765
Actuarial asset value	30,046,017	27,401,974
Tier 1/Tier 2 Unfunded actuarial accrued liability	7,146,638	8,481,791
Tier 1/ Tier 2 Funded status	81%	76%
Combined valuation payroll	$5,617,966	$5,209,949
Tier 1/Tier 2 UAL as a percentage of payroll	127%	163%
Tier 1/Tier 2 UAL rate	4.26%	5.77%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	33	36
Tier 1/Tier 2 dormant members	4	7
Tier 1/Tier 2 retirees and beneficiaries	68	64

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	**December 31, 2011**
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	**December 31, 2011**
1. Total side account	$0	$0
2. Combined valuation payroll	5,617,966	5,209,949
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$3,900,046	$3,641,049
2. Employer reserves	13,380,320	12,021,443
3. Benefits in force reserve	12,765,651	11,739,481
4. Total market value of assets ***(1. + 2. + 3.)***	**$30,046,017**	**$27,401,974**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$27,401,974
2. Regular employer contributions	606,414
3. Benefit payments and expenses	(2,004,936)
4. Adjustments[2]	367,438
5. Interest credited	3,675,128
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$30,046,017**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$354,317	$297,988
Tier 1 General Service	0	0
Tier 2 Police & Fire	210,110	217,967
Tier 2 General Service	10,349	9,206
Total	**$574,776**	**$525,161**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$585,662	$574,776	($10,886)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$11,039,293	$9,925,040
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	3,647,407	3,013,057
▪ Tier 2 General Service	137,371	81,560
▪ **Total Active Members**	**$14,824,071**	**$13,019,657**
Dormant Members	856,699	1,513,089
Retired Members and Beneficiaries	21,511,885	21,351,019
Total Actuarial Accrued Liability	**$37,192,655**	**$35,883,765**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$38,438,945	$37,192,655	($1,246,290)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$37,192,655	$35,883,765
2. Actuarial value of assets	30,046,017	27,401,974
3. Unfunded accrued liability *(1. – 2.)*	7,146,638	8,481,791
4. Funded percentage *(2. ÷ 1.)*	81%	76%
5. Combined valuation payroll	$5,617,966	$5,209,949
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	127%	163%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$7,146,638	$517,273
Total				**$7,146,638**	**$517,273**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$35,883,765
b. Normal cost at December 31, 2011	525,161
c. Benefit payments during 2012	(1,989,242)
d. Interest at 8.0% to December 31, 2012	2,833,144
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	37,252,828
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,246,290)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	36,006,538
2. Actuarial accrued liability at December 31, 2012	37,192,655
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,186,117)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	27,401,974
b. Contributions for 2012[1]	606,414
c. Benefit payments and expenses during 2012	(2,004,936)
d. Interest at 8.0% to December 31, 2012	2,136,217
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	28,139,668
5. Actuarial value of assets at December 31, 2012	30,046,017
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,906,349
7. Total actuarial gain/(loss) *(3. + 6.)*	**$720,232**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$8,481,791**
2. Expected increase	631,369
3. Liability (gain)/loss	1,186,117
4. Asset (gain)/loss	(1,906,349)
5. Change due to changes in assumptions, methods, and plan provisions	(1,246,290)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$7,146,638**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$354,317	$1,924,381	18.41%	$297,988	$1,787,127	16.67%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	210,110	1,330,306	15.79%	217,967	1,302,345	16.74%
Tier 2 General Service	10,349	118,981	8.70%	9,206	116,779	7.88%
Total	**$574,776**	**$3,373,668**	**17.04%**	**$525,161**	**$3,206,251**	**16.38%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$7,146,638	$8,481,791
2. Next year's Tier 1/Tier 2 UAL payment	517,273	657,338
3. Combined valuation payroll	5,617,966	5,209,949
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	9.21%	12.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

		Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1.	Tier 1/Tier 2 pension contribution rates		
a.	Employer Tier 1/Tier 2 pension normal cost rate	17.04%	16.38%
b.	Tier 1/Tier 2 UAL rate	9.21%	12.62%
c.	Multnomah Fire District #10 rate	0.13%	0.13%
d.	Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	26.38%	29.13%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	17.75%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	17.75%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.55%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.55%
c. Funded percentage	81%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.55%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	14.20%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	21.30%
7. July 1, 2015 total pension rate, before adjustment	26.38%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.08%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	9.21%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.13%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	21.30%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.04%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.04%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	21.30%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.04%	16.38%
b. Tier 1/Tier 2 UAL rate	4.13%	5.64%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	21.30%	22.15%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$1,924,381	$1,924,381
Tier 2	118,981	1,330,306	1,449,287
Tier 1/Tier 2 valuation payroll	118,981	3,254,687	3,373,668
OPSRP valuation payroll	79,474	2,164,824	2,244,298
Combined valuation payroll	**$198,455**	**$5,419,511**	**$5,617,966**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	2	2	4	0	2	2	4
Police & Fire	18	13	22	53	19	15	24	58
Total	18	15	24	57	19	17	26	62
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	4	5	N/A	9	3	11	N/A	14
Total	4	5	N/A	9	3	11	N/A	14
Dormant Members								
General Service	0	1	1	2	0	1	1	2
Police & Fire	2	1	1	4	4	2	0	6
Total	2	2	2	6	4	3	1	8
Retired Members and Beneficiaries								
General Service	6	0	0	6	6	0	0	6
Police & Fire	54	8	0	62	53	5	0	58
Total	60	8	0	68	59	5	0	64
Grand Total Number of Members	**84**	**30**	**26**	**140**	**85**	**36**	**27**	**148**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							1
35-39		1	4							5
40-44			4	3						7
45-49			2	1	4					7
50-54					2	1				3
55-59			3		1	3	2			9
60-64					1					1
65-69										
70-74										
75+										
Total	0	1	14	4	8	4	2	0	0	33

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	560
50-54	1	1,259
55-59	2	2,059
60-64		
65-69		
70-74		
75+		
Total	4	1,484

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49	1	131
50-54	3	755
55-59	17	2,879
60-64	13	2,812
65-69	16	2,646
70-74	4	1,318
75-79	4	226
80-84	3	2,096
85-89	4	484
90-94	3	327
95-99		
100+		
Total	68	2,141

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Keno Rural Fire Protection District/2646
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Keno Rural Fire Protection District/2646

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Keno Rural Fire Protection District -- #2646

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Keno Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Keno Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Keno Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.60%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.21%	0.21%	0.21%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.41%**	**8.17%**	**12.27%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.97%**	**8.65%**	**12.75%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 100%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	17.90%	17.90%
Minimum July 1, 2015 Rate	14.32%	10.74%
Maximum July 1, 2015 Rate	21.48%	25.06%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$558,396	$534,189	($24,207)	105%	$122,498	(20%)
12/31/2008	439,513	683,188	243,675	64%	136,382	179%
12/31/2009	536,346	605,171	68,825	89%	128,941	53%
12/31/2010	614,060	632,015	17,955	97%	117,841	15%
12/31/2011	648,686	725,949	77,263	89%	130,385	59%
12/31/2012	751,036	752,159	1,123	100%	105,208	1%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Keno Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,123	$77,263
Allocated pooled OPSRP UAL	7,415	2,225
Side account	0	0
Net unfunded pension actuarial accrued liability	8,538	79,488
Combined valuation payroll	105,208	130,385
Net pension UAL as a percentage of payroll	8%	61%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,207	$3,378

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$17,462	$22,910
Tier 1/Tier 2 valuation payroll	105,208	130,385
Tier 1/Tier 2 pension normal cost rate	16.60%	17.57%
Tier 1/ Tier 2 Actuarial accrued liability	$752,159	$725,949
Actuarial asset value	751,036	648,686
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,123	77,263
Tier 1/ Tier 2 Funded status	100%	89%
Combined valuation payroll	$105,208	$130,385
Tier 1/Tier 2 UAL as a percentage of payroll	1%	59%
Tier 1/Tier 2 UAL rate	0.21%	3.91%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	1
Tier 1/Tier 2 retirees and beneficiaries	3	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	105,208	130,385
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$171,350	$155,319
2. Employer reserves	535,978	491,357
3. Benefits in force reserve	43,708	2,010
4. Total market value of assets ***(1. + 2. + 3.)***	**$751,036**	**$648,686**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$648,686
2. Regular employer contributions	21,738
3. Benefit payments and expenses	(6,865)
4. Adjustments[2]	(5,930)
5. Interest credited	93,407
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$751,036**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$17,462	$18,222
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	4,688
Tier 2 General Service	0	0
Total	**$17,462**	**$22,910**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$18,481	$17,462	($1,019)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$674,932	$651,899
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	3,572	70,270
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$678,504**	**$722,169**
Dormant Members	0	125
Retired Members and Beneficiaries	73,655	3,655
Total Actuarial Accrued Liability	**$752,159**	**$725,949**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$767,173	$752,159	($15,014)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$752,159	$725,949
2. Actuarial value of assets	751,036	648,686
3. Unfunded accrued liability *(1. – 2.)*	1,123	77,263
4. Funded percentage *(2. ÷ 1.)*	100%	89%
5. Combined valuation payroll	$105,208	$130,385
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	1%	59%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,123	$81
Total				**$1,123**	**$81**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$725,949
b. Normal cost at December 31, 2011	22,910
c. Benefit payments during 2012	(6,811)
d. Interest at 8.0% to December 31, 2012	59,636
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	801,684
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(15,014)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	786,670
2. Actuarial accrued liability at December 31, 2012	752,159
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	34,511
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	648,686
b. Contributions for 2012[1]	21,738
c. Benefit payments and expenses during 2012	(6,865)
d. Interest at 8.0% to December 31, 2012	52,490
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	716,049
5. Actuarial value of assets at December 31, 2012	751,036
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	34,987
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$69,498**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$77,263**
2. Expected increase	8,372
3. Liability (gain)/loss	(34,511)
4. Asset (gain)/loss	(34,987)
5. Change due to changes in assumptions, methods, and plan provisions	(15,014)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,123**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$17,462	$105,208	16.60%	$18,222	$107,339	16.98%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	4,688	23,046	20.34%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$17,462**	**$105,208**	**16.60%**	**$22,910**	**$130,385**	**17.57%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,123	$77,263
2. Next year's Tier 1/Tier 2 UAL payment	81	5,985
3. Combined valuation payroll	105,208	130,385
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.08%	4.59%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.60%	17.57%
b. Tier 1/Tier 2 UAL rate	0.08%	4.59%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.81%	22.29%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	17.90%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	17.90%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.58%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.58%
c. Funded percentage	100%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.58%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	14.32%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	21.48%
7. July 1, 2015 total pension rate, before adjustment	16.81%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.08%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.08%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.81%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.60%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.60%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.81%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.60%	17.57%
b. Tier 1/Tier 2 UAL rate	0.08%	3.78%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.81%	21.48%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$105,208	$105,208
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	105,208	105,208
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$105,208**	**$105,208**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	2	5	N/A	7
Total	0	0	N/A	0	2	5	N/A	7
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	1	0	0	1
Total	0	0	0	0	1	0	0	1
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	1	1	0	2	0	0	0	0
Total	2	1	0	3	1	0	0	1
Grand Total Number of Members	**3**	**1**	**0**	**4**	**5**	**5**	**0**	**10**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64						1				**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	435
60-64	1	1
65-69		
70-74	1	23
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	3	153

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Jefferson County/2006
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Jefferson County/2006

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Jefferson County/2006

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jefferson County -- #2006

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Jefferson County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.36%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.29%)	(0.29%)	(0.29%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.67%**	**7.67%**	**11.77%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.23%**	**8.15%**	**12.25%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 93%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	12.07%	12.07%
Minimum July 1, 2015 Rate	9.07%	6.07%
Maximum July 1, 2015 Rate	15.07%	18.07%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$27,819,143	$25,351,071	($2,468,072)	110%	$6,548,918	(38%)
12/31/2008	21,467,039	26,384,656	4,917,617	81%	6,156,067	80%
12/31/2009	24,737,248	28,038,860	3,301,612	88%	6,027,492	55%
12/31/2010	26,047,852	28,853,513	2,805,661	90%	5,776,442	49%
12/31/2011	25,322,119	30,409,250	5,087,131	83%	5,991,100	85%
12/31/2012	28,079,743	30,329,042	2,249,299	93%	5,795,860	39%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Jefferson County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$2,249,299	$5,087,131
Allocated pooled OPSRP UAL	408,508	102,222
Side account	0	0
Net unfunded pension actuarial accrued liability	2,657,807	5,189,353
Combined valuation payroll	5,795,860	5,991,100
Net pension UAL as a percentage of payroll	46%	87%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$121,600	$155,202

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$398,294	$295,521
Tier 1/Tier 2 valuation payroll	2,592,358	2,697,742
Tier 1/Tier 2 pension normal cost rate	15.36%	10.95%
Tier 1/ Tier 2 Actuarial accrued liability	$30,329,042	$30,409,250
Actuarial asset value	28,079,743	25,322,119
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,249,299	5,087,131
Tier 1/ Tier 2 Funded status	93%	83%
Combined valuation payroll	$5,795,860	$5,991,100
Tier 1/Tier 2 UAL as a percentage of payroll	39%	85%
Tier 1/Tier 2 UAL rate	(0.29%)	4.12%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	52	56
Tier 1/Tier 2 dormant members	82	84
Tier 1/Tier 2 retirees and beneficiaries	174	160

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	5,795,860	5,991,100
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$5,273,377	$4,809,271
2. Employer reserves	13,802,516	12,044,975
3. Benefits in force reserve	9,003,849	8,467,873
4. Total market value of assets ***(1. + 2. + 3.)***	**$28,079,743**	**$25,322,119**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$25,322,119
2. Regular employer contributions	380,065
3. Benefit payments and expenses	(1,414,118)
4. Adjustments[2]	449,968
5. Interest credited	3,341,708
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$28,079,743**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$75,552	$40,426
Tier 1 General Service	142,350	64,031
Tier 2 Police & Fire	68,928	66,090
Tier 2 General Service	111,464	124,974
Total	**$398,294**	**$295,521**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$293,625	$398,294	$104,669

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$1,485,943	$1,368,745
▪ Tier 1 General Service	6,017,912	6,626,300
▪ Tier 2 Police & Fire	1,449,263	1,093,557
▪ Tier 2 General Service	2,563,369	2,255,767
▪ **Total Active Members**	**$11,516,487**	**$11,344,369**
Dormant Members	3,639,826	3,664,054
Retired Members and Beneficiaries	15,172,729	15,400,827
Total Actuarial Accrued Liability	**$30,329,042**	**$30,409,250**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$31,621,157	$30,329,042	($1,292,115)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$30,329,042	$30,409,250
2. Actuarial value of assets	28,079,743	25,322,119
3. Unfunded accrued liability *(1. – 2.)*	2,249,299	5,087,131
4. Funded percentage *(2. ÷ 1.)*	93%	83%
5. Combined valuation payroll	$5,795,860	$5,991,100
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	39%	85%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$2,249,299	$162,804
Total				**$2,249,299**	**$162,804**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$30,409,250
b. Normal cost at December 31, 2011	295,521
c. Benefit payments during 2012	(1,403,049)
d. Interest at 8.0% to December 31, 2012	2,400,260
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	31,701,982
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,292,115)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	30,409,867
2. Actuarial accrued liability at December 31, 2012	30,329,042
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	80,825
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	25,322,119
b. Contributions for 2012[1]	380,065
c. Benefit payments and expenses during 2012	(1,414,118)
d. Interest at 8.0% to December 31, 2012	1,984,407
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	26,272,474
5. Actuarial value of assets at December 31, 2012	28,079,743
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,807,269
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$1,888,094**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$5,087,131**
2. Expected increase	342,377
3. Liability (gain)/loss	(80,825)
4. Asset (gain)/loss	(1,807,269)
5. Change due to changes in assumptions, methods, and plan provisions	(1,292,115)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$2,249,299**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$75,552	$311,930	24.22%	$40,426	$319,143	12.67%
Tier 1 General Service	142,350	835,986	17.03%	64,031	841,727	7.61%
Tier 2 Police & Fire	68,928	445,707	15.46%	66,090	430,898	15.34%
Tier 2 General Service	111,464	998,735	11.16%	124,974	1,105,974	11.30%
Total	**$398,294**	**$2,592,358**	**15.36%**	**$295,521**	**$2,697,742**	**10.95%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$2,249,299	$5,087,131
2. Next year's Tier 1/Tier 2 UAL payment	162,804	373,015
3. Combined valuation payroll	5,795,860	5,991,100
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.81%	6.23%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.36%	10.95%
b. Tier 1/Tier 2 UAL rate	2.81%	6.23%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.30%	17.31%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.07%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.07%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.41%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	93%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.07%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	15.07%
7. July 1, 2015 total pension rate, before adjustment	18.30%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.23%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.81%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.42%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	15.07%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.36%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.36%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.07%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.36%	10.95%
b. Tier 1/Tier 2 UAL rate	(0.42%)	3.99%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	15.07%	15.07%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$835,986	$311,930	$1,147,916
Tier 2	998,735	445,707	1,444,442
Tier 1/Tier 2 valuation payroll	1,834,721	757,637	2,592,358
OPSRP valuation payroll	2,257,460	946,042	3,203,502
Combined valuation payroll	**$4,092,181**	**$1,703,679**	**$5,795,860**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	16	23	51	90	17	26	52	95
Police & Fire	6	7	22	35	6	7	26	39
Total	22	30	73	125	23	33	78	134
Active Members with previous service segments with the employer								
General Service	31	27	N/A	58	40	32	N/A	72
Police & Fire	10	11	N/A	21	9	16	N/A	25
Total	41	38	N/A	79	49	48	N/A	97
Dormant Members								
General Service	32	41	7	80	35	40	3	78
Police & Fire	5	4	2	11	5	4	0	9
Total	37	45	9	91	40	44	3	87
Retired Members and Beneficiaries								
General Service	117	18	0	135	106	17	0	123
Police & Fire	34	5	0	39	33	4	0	37
Total	151	23	0	174	139	21	0	160
Grand Total Number of Members	**251**	**136**	**82**	**469**	**251**	**146**	**81**	**478**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			4	1						5
40-44		2	1	5						8
45-49		1	3	1		2				7
50-54		1	3	3	1	2	1			11
55-59		1	4	2	1	1	2			11
60-64			3	4						7
65-69	1			1						2
70-74			1							1
75+										
Total	1	5	19	17	2	5	3	0	0	52

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	298
35-39	4	489
40-44	7	407
45-49	15	1,091
50-54	13	615
55-59	15	437
60-64	13	405
65-69	8	275
70-74	2	87
75+	4	107
Total	82	538

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	1	108
45-49	4	264
50-54	5	929
55-59	13	606
60-64	44	889
65-69	33	616
70-74	28	394
75-79	24	713
80-84	11	590
85-89	8	639
90-94	2	154
95-99	1	178
100+		
Total	174	651

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Jefferson County Soil & Water Conservation District/2841
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Jefferson County Soil & Water Conservation District/2841

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Jefferson County Soil & Water Conservation District/2841

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES
RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jefferson County Soil & Water Conservation District -- #2841

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County Soil & Water Conservation District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County Soil & Water Conservation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Jefferson County Soil & Water Conservation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	8.82%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.41%)	(0.41%)	(0.41%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**7.55%**	**11.65%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**8.03%**	**12.13%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 91%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$150,552	$86,460	($64,092)	174%	$140,543	(46%)
12/31/2008	112,885	91,646	(21,239)	123%	137,000	(16%)
12/31/2009	140,414	101,931	(38,483)	138%	132,003	(29%)
12/31/2010	134,596	126,517	(8,079)	106%	115,888	(7%)
12/31/2011	132,805	131,462	(1,343)	101%	140,343	(1%)
12/31/2012	147,933	162,410	14,477	91%	185,702	8%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Jefferson County Soil & Water Conservation District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$14,477	($1,343)
Allocated pooled OPSRP UAL	13,089	2,395
Side account	0	0
Net unfunded pension actuarial accrued liability	27,566	1,052
Combined valuation payroll	185,702	140,343
Net pension UAL as a percentage of payroll	15%	1%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,896	$3,636

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$5,075	$3,784
Tier 1/Tier 2 valuation payroll	57,522	55,067
Tier 1/Tier 2 pension normal cost rate	8.82%	6.87%
Tier 1/ Tier 2 Actuarial accrued liability	$162,410	$131,462
Actuarial asset value	147,933	132,805
Tier 1/Tier 2 Unfunded actuarial accrued liability	14,477	(1,343)
Tier 1/ Tier 2 Funded status	91%	101%
Combined valuation payroll	$185,702	$140,343
Tier 1/Tier 2 UAL as a percentage of payroll	8%	(1%)
Tier 1/Tier 2 UAL rate	(0.41%)	(0.43%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	185,702	140,343
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$15,360	$13,240
2. Employer reserves	88,757	77,134
3. Benefits in force reserve	43,816	42,431
4. Total market value of assets *(1. + 2. + 3.)*	**$147,933**	**$132,805**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$132,805
2. Regular employer contributions	644
3. Benefit payments and expenses	(6,882)
4. Adjustments[2]	2,543
5. Interest credited	18,822
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$147,933**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	5,075	3,784
Total	**$5,075**	**$3,784**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,271	$5,075	$804

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	88,574	54,292
▪ **Total Active Members**	**$88,574**	**$54,292**
Dormant Members	0	0
Retired Members and Beneficiaries	73,836	77,170
Total Actuarial Accrued Liability	**$162,410**	**$131,462**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$140,863	$162,410	$21,547

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$162,410	$131,462
2. Actuarial value of assets	147,933	132,805
3. Unfunded accrued liability *(1. – 2.)*	14,477	(1,343)
4. Funded percentage *(2. ÷ 1.)*	91%	101%
5. Combined valuation payroll	$185,702	$140,343
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	8%	(1%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$14,477	$1,048
Total				**$14,477**	**$1,048**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$131,462
b. Normal cost at December 31, 2011	3,784
c. Benefit payments during 2012	(6,828)
d. Interest at 8.0% to December 31, 2012	10,547
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	138,965
f. Change in actuarial accrued liability due to assumption, method, and plan changes	21,547
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	160,512
2. Actuarial accrued liability at December 31, 2012	162,410
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,898)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	132,805
b. Contributions for 2012[1]	644
c. Benefit payments and expenses during 2012	(6,882)
d. Interest at 8.0% to December 31, 2012	10,375
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	136,943
5. Actuarial value of assets at December 31, 2012	147,933
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	10,990
7. Total actuarial gain/(loss) *(3. + 6.)*	**$9,092**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($1,343)**
2. Expected increase	3,365
3. Liability (gain)/loss	1,898
4. Asset (gain)/loss	(10,990)
5. Change due to changes in assumptions, methods, and plan provisions	21,547
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$14,477**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	5,075	57,522	8.82%	3,784	55,067	6.87%
Total	**$5,075**	**$57,522**	**8.82%**	**$3,784**	**$55,067**	**6.87%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$14,477	($1,343)
2. Next year's Tier 1/Tier 2 UAL payment	1,048	(779)
3. Combined valuation payroll	185,702	140,343
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.56%	(0.56%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	8.82%	6.87%
b. Tier 1/Tier 2 UAL rate	0.56%	(0.56%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	9.51%	6.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	91%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	9.51%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.10%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.56%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.54%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	8.82%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	8.82%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	8.82%	6.87%
b. Tier 1/Tier 2 UAL rate	(0.54%)	(0.56%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	6.44%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	57,522	0	57,522
Tier 1/Tier 2 valuation payroll	57,522	0	57,522
OPSRP valuation payroll	128,180	0	128,180
Combined valuation payroll	**$185,702**	**$0**	**$185,702**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	3	4	0	1	2	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	3	4	0	1	2	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Grand Total Number of Members	**0**	**2**	**3**	**5**	**0**	**2**	**2**	**4**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							**1**
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	600
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	600

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Jefferson County Rural Fire Protection District #1/2575
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Jefferson County Rural Fire Protection District #1/2575

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Jefferson County Rural Fire Protection District #1/2575

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jefferson County Rural Fire Protection District #1 -- #2575

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County Rural Fire Protection District #1 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County Rural Fire Protection District #1.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Jefferson County Rural Fire Protection District #1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.31%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.75%	0.75%	0.75%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.66%**	**8.71%**	**12.81%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.22%**	**9.19%**	**13.29%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 97%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.06%	10.06%
Minimum July 1, 2015 Rate	7.06%	4.06%
Maximum July 1, 2015 Rate	13.06%	16.06%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,804,387	$1,515,025	($289,362)	119%	$213,297	(136%)
12/31/2008	1,408,857	1,571,096	162,239	90%	170,011	95%
12/31/2009	1,549,973	1,693,055	143,082	92%	229,869	62%
12/31/2010	1,682,599	1,644,460	(38,139)	102%	256,314	(15%)
12/31/2011	1,590,509	1,837,042	246,533	87%	304,654	81%
12/31/2012	1,740,658	1,800,503	59,845	97%	300,941	20%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Jefferson County Rural Fire Protection District #1

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$59,845	$246,533
Allocated pooled OPSRP UAL	21,211	5,198
Side account	0	0
Net unfunded pension actuarial accrued liability	81,056	251,731
Combined valuation payroll	300,941	304,654
Net pension UAL as a percentage of payroll	27%	83%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$6,314	$7,892

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$7,521	$6,606
Tier 1/Tier 2 valuation payroll	61,080	94,115
Tier 1/Tier 2 pension normal cost rate	12.31%	7.02%
Tier 1/ Tier 2 Actuarial accrued liability	$1,800,503	$1,837,042
Actuarial asset value	1,740,658	1,590,509
Tier 1/Tier 2 Unfunded actuarial accrued liability	59,845	246,533
Tier 1/ Tier 2 Funded status	97%	87%
Combined valuation payroll	$300,941	$304,654
Tier 1/Tier 2 UAL as a percentage of payroll	20%	81%
Tier 1/Tier 2 UAL rate	0.75%	5.54%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	300,941	304,654
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$166,823	$145,293
2. Employer reserves	784,599	669,267
3. Benefits in force reserve	789,235	775,949
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,740,658**	**$1,590,509**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,590,509
2. Regular employer contributions	17,063
3. Benefit payments and expenses	(123,955)
4. Adjustments [2]	44,979
5. Interest credited	212,062
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,740,658**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	7,521	6,606
Tier 2 General Service	0	0
Total	**$7,521**	**$6,606**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$7,255	$7,521	$266

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$106,013	$110,586
▪ Tier 1 General Service	148,589	145,701
▪ Tier 2 Police & Fire	93,966	50,339
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$348,568**	**$306,626**
Dormant Members	121,965	119,170
Retired Members and Beneficiaries	1,329,970	1,411,246
Total Actuarial Accrued Liability	**$1,800,503**	**$1,837,042**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,894,934	$1,800,503	($94,431)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,800,503	$1,837,042
2. Actuarial value of assets	1,740,658	1,590,509
3. Unfunded accrued liability *(1. – 2.)*	59,845	246,533
4. Funded percentage *(2. ÷ 1.)*	97%	87%
5. Combined valuation payroll	$300,941	$304,654
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	20%	81%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$59,845	$4,332
Total				**$59,845**	**$4,332**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,837,042
b. Normal cost at December 31, 2011	6,606
c. Benefit payments during 2012	(122,985)
d. Interest at 8.0% to December 31, 2012	142,572
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,863,235
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(94,431)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,768,804
2. Actuarial accrued liability at December 31, 2012	1,800,503
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(31,699)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,590,509
b. Contributions for 2012[1]	17,063
c. Benefit payments and expenses during 2012	(123,955)
d. Interest at 8.0% to December 31, 2012	122,965
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,606,581
5. Actuarial value of assets at December 31, 2012	1,740,658
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	134,076
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$102,377**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$246,533**
2. Expected increase	10,120
3. Liability (gain)/loss	31,699
4. Asset (gain)/loss	(134,076)
5. Change due to changes in assumptions, methods, and plan provisions	(94,431)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$59,845**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	36,211	0.00%
Tier 2 Police & Fire	7,521	61,080	12.31%	6,606	57,904	11.41%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$7,521**	**$61,080**	**12.31%**	**$6,606**	**$94,115**	**7.02%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$59,845	$246,533
2. Next year's Tier 1/Tier 2 UAL payment	4,332	16,491
3. Combined valuation payroll	300,941	304,654
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.44%	5.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.31%	7.02%
b. Tier 1/Tier 2 UAL rate	1.44%	5.41%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.88%	12.56%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.06%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.06%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.01%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	97%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.06%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.06%
7. July 1, 2015 total pension rate, before adjustment	13.88%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.82%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.44%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.62%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.06%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.31%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.31%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.06%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.31%	7.02%
b. Tier 1/Tier 2 UAL rate	0.62%	5.41%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.06%	12.56%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	61,080	61,080
Tier 1/Tier 2 valuation payroll	0	61,080	61,080
OPSRP valuation payroll	0	239,861	239,861
Combined valuation payroll	**$0**	**$300,941**	**$300,941**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	1	3	4	0	1	3	4
Total	1	1	3	5	1	1	3	5
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	0	N/A	1	1	0	N/A	1
Total	1	0	N/A	1	1	0	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	5	0	1	6	5	0	0	5
Total	5	0	1	6	5	0	0	5
Grand Total Number of Members	**8**	**1**	**4**	**13**	**8**	**1**	**3**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44		1								**1**
45-49										
50-54										
55-59										
60-64										
65-69										
70-74					1					**1**
75+										
Total	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	2,188
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	2,188

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	2,651
55-59	3	1,711
60-64	1	151
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	1,587

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Jackson County Fire District #5/2556
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Jackson County Fire District #5/2556

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jackson County Fire District #5 -- #2556

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Jackson County Fire District #5 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jackson County Fire District #5.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Jackson County Fire District #5

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.60%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	1.16%	1.16%	1.16%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**19.36%**	**9.12%**	**13.22%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**19.92%**	**9.60%**	**13.70%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 84%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	15.63%	15.63%
Minimum July 1, 2015 Rate	12.50%	9.37%
Maximum July 1, 2015 Rate	18.76%	21.89%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$12,955,591	$12,046,398	($909,193)	108%	$1,403,147	(65%)
12/31/2008	9,985,499	12,541,487	2,555,988	80%	1,804,189	142%
12/31/2009	11,458,597	13,191,131	1,732,534	87%	1,937,662	89%
12/31/2010	12,338,988	14,587,295	2,248,307	85%	2,158,071	104%
12/31/2011	11,630,678	14,920,503	3,289,825	78%	2,094,912	157%
12/31/2012	12,643,144	15,114,250	2,471,106	84%	2,256,324	110%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Jackson County Fire District #5

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$2,471,106	$3,289,825
Allocated pooled OPSRP UAL	159,032	35,744
Side account	0	0
Net unfunded pension actuarial accrued liability	2,630,138	3,325,569
Combined valuation payroll	2,256,324	2,094,912
Net pension UAL as a percentage of payroll	117%	159%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$47,339	$54,270

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$242,990	$211,762
Tier 1/Tier 2 valuation payroll	1,380,781	1,421,481
Tier 1/Tier 2 pension normal cost rate	17.60%	14.90%
Tier 1/ Tier 2 Actuarial accrued liability	$15,114,250	$14,920,503
Actuarial asset value	12,643,144	11,630,678
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,471,106	3,289,825
Tier 1/ Tier 2 Funded status	84%	78%
Combined valuation payroll	$2,256,324	$2,094,912
Tier 1/Tier 2 UAL as a percentage of payroll	110%	157%
Tier 1/Tier 2 UAL rate	1.16%	4.49%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	15	16
Tier 1/Tier 2 dormant members	2	3
Tier 1/Tier 2 retirees and beneficiaries	22	18

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	2,256,324	2,094,912
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,558,593	$1,605,323
2. Employer reserves	5,595,042	5,125,898
3. Benefits in force reserve	5,489,509	4,899,457
4. Total market value of assets ***(1. + 2. + 3.)***	**$12,643,144**	**$11,630,678**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$11,630,678
2. Regular employer contributions	228,987
3. Benefit payments and expenses	(862,166)
4. Adjustments[2]	91,968
5. Interest credited	1,553,678
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$12,643,144**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	**December 31, 2011**
Tier 1 Police & Fire	$140,011	$111,352
Tier 1 General Service	0	0
Tier 2 Police & Fire	96,339	93,853
Tier 2 General Service	6,640	6,557
Total	**$242,990**	**$211,762**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$218,758	$242,990	$24,232

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$4,313,084	$4,798,332
▪ Tier 1 General Service	0	115
▪ Tier 2 Police & Fire	1,163,155	820,518
▪ Tier 2 General Service	124,540	95,815
▪ **Total Active Members**	**$5,600,779**	**$5,714,780**
Dormant Members	262,890	294,903
Retired Members and Beneficiaries	9,250,581	8,910,820
Total Actuarial Accrued Liability	**$15,114,250**	**$14,920,503**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$15,759,916	$15,114,250	($645,666)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$15,114,250	$14,920,503
2. Actuarial value of assets	12,643,144	11,630,678
3. Unfunded accrued liability *(1. – 2.)*	2,471,106	3,289,825
4. Funded percentage *(2. ÷ 1.)*	84%	78%
5. Combined valuation payroll	$2,256,324	$2,094,912
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	110%	157%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$2,471,106	$178,858
Total				**$2,471,106**	**$178,858**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$14,920,503
b. Normal cost at December 31, 2011	211,762
c. Benefit payments during 2012	(855,417)
d. Interest at 8.0% to December 31, 2012	1,176,365
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	15,453,213
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(645,666)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	14,807,547
2. Actuarial accrued liability at December 31, 2012	15,114,250
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(306,703)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	11,630,678
b. Contributions for 2012[1]	228,987
c. Benefit payments and expenses during 2012	(862,166)
d. Interest at 8.0% to December 31, 2012	905,127
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	11,902,626
5. Actuarial value of assets at December 31, 2012	12,643,144
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	740,519
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$433,816**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$3,289,825**
2. Expected increase	260,763
3. Liability (gain)/loss	306,703
4. Asset (gain)/loss	(740,519)
5. Change due to changes in assumptions, methods, and plan provisions	(645,666)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$2,471,106**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$140,011	$682,734	20.51%	$111,352	$739,674	15.05%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	96,339	640,479	15.04%	93,853	626,101	14.99%
Tier 2 General Service	6,640	57,568	11.53%	6,557	55,706	11.77%
Total	**$242,990**	**$1,380,781**	**17.60%**	**$211,762**	**$1,421,481**	**14.90%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$2,471,106	$3,289,825
2. Next year's Tier 1/Tier 2 UAL payment	178,858	244,946
3. Combined valuation payroll	2,256,324	2,094,912
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	7.93%	11.69%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.60%	14.90%
b. Tier 1/Tier 2 UAL rate	7.93%	11.69%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	25.66%	26.72%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	15.63%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.63%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.13%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.13%
c. Funded percentage	84%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.13%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.50%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	18.76%
7. July 1, 2015 total pension rate, before adjustment	25.66%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(6.90%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	7.93%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.03%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	18.76%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.60%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.60%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	18.76%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.60%	14.90%
b. Tier 1/Tier 2 UAL rate	1.03%	4.36%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	18.76%	19.39%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$682,734	$682,734
Tier 2	57,568	640,479	698,047
Tier 1/Tier 2 valuation payroll	57,568	1,323,213	1,380,781
OPSRP valuation payroll	23,212	852,331	875,543
Combined valuation payroll	**$80,780**	**$2,175,544**	**$2,256,324**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	1	2	0	1	1	2
Police & Fire	7	7	11	25	8	7	9	24
Total	7	8	12	27	8	8	10	26
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	1	0	N/A	1	2	1	N/A	3
Total	1	0	N/A	1	3	1	N/A	4
Dormant Members								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	1	0	1	1	1	0	2
Total	1	1	0	2	2	1	0	3
Retired Members and Beneficiaries								
General Service	2	0	0	2	1	0	0	1
Police & Fire	18	2	0	20	15	2	0	17
Total	20	2	0	22	16	2	0	18
Grand Total Number of Members	**29**	**11**	**12**	**52**	**29**	**12**	**10**	**51**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39			2							**2**
40-44		1	1							**2**
45-49		1	1	1						**3**
50-54			1		3		1			**5**
55-59				1						**1**
60-64					1		1			**2**
65-69										
70-74										
75+										
Total	**0**	**2**	**5**	**2**	**4**	**0**	**2**	**0**	**0**	**15**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	1,084
55-59		
60-64		
65-69		
70-74	1	1,346
75+		
Total	2	1,215

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	4	3,733
55-59	2	3,148
60-64	8	3,207
65-69	5	2,289
70-74	1	2,447
75-79	1	774
80-84		
85-89	1	244
90-94		
95-99		
100+		
Total	22	2,809

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Ice Fountain Water District/2717
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Ice Fountain Water District/2717

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Ice Fountain Water District/2717

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Ice Fountain Water District -- #2717

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Ice Fountain Water District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Ice Fountain Water District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Ice Fountain Water District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.43%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.72%)	(0.72%)	(0.72%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.31%**	**7.24%**	**11.34%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.87%**	**7.72%**	**11.82%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 96%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$681,704	$556,515	($125,189)	123%	$148,987	(84%)
12/31/2008	528,847	615,835	86,988	86%	160,298	54%
12/31/2009	602,075	649,537	47,462	93%	169,216	28%
12/31/2010	642,750	676,412	33,662	95%	180,977	19%
12/31/2011	636,512	704,868	68,356	90%	223,782	31%
12/31/2012	708,964	738,703	29,739	96%	236,893	13%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Ice Fountain Water District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$29,739	$68,356
Allocated pooled OPSRP UAL	16,697	3,818
Side account	0	0
Net unfunded pension actuarial accrued liability	46,436	72,174
Combined valuation payroll	236,893	223,782
Net pension UAL as a percentage of payroll	20%	32%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$4,970	$5,797

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$12,304	$10,123
Tier 1/Tier 2 valuation payroll	98,959	96,031
Tier 1/Tier 2 pension normal cost rate	12.43%	10.54%
Tier 1/ Tier 2 Actuarial accrued liability	$738,703	$704,868
Actuarial asset value	708,964	636,512
Tier 1/Tier 2 Unfunded actuarial accrued liability	29,739	68,356
Tier 1/ Tier 2 Funded status	96%	90%
Combined valuation payroll	$236,893	$223,782
Tier 1/Tier 2 UAL as a percentage of payroll	13%	31%
Tier 1/Tier 2 UAL rate	(0.72%)	1.17%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	3	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	236,893	223,782
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$93,855	$81,602
2. Employer reserves	373,928	320,273
3. Benefits in force reserve	241,182	234,637
4. Total market value of assets ***(1. + 2. + 3.)***	**$708,964**	**$636,512**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$636,512
2. Regular employer contributions	6,905
3. Benefit payments and expenses	(37,879)
4. Adjustments [2]	18,093
5. Interest credited	85,333
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$708,964**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	12,304	10,123
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$12,304**	**$10,123**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$11,543	$12,304	$761

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	332,278	278,125
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$332,278**	**$278,125**
Dormant Members	0	0
Retired Members and Beneficiaries	406,425	426,743
Total Actuarial Accrued Liability	**$738,703**	**$704,868**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$743,949	$738,703	($5,246)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$738,703	$704,868
2. Actuarial value of assets	708,964	636,512
3. Unfunded accrued liability *(1. – 2.)*	29,739	68,356
4. Funded percentage *(2. ÷ 1.)*	96%	90%
5. Combined valuation payroll	$236,893	$223,782
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	13%	31%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$29,739	$2,153
Total				**$29,739**	**$2,153**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$704,868
b. Normal cost at December 31, 2011	10,123
c. Benefit payments during 2012	(37,583)
d. Interest at 8.0% to December 31, 2012	55,696
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	733,104
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(5,246)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	727,858
2. Actuarial accrued liability at December 31, 2012	738,703
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(10,845)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	636,512
b. Contributions for 2012[1]	6,905
c. Benefit payments and expenses during 2012	(37,879)
d. Interest at 8.0% to December 31, 2012	49,682
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	655,220
5. Actuarial value of assets at December 31, 2012	708,964
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	53,744
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$42,899**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$68,356**
2. Expected increase	9,528
3. Liability (gain)/loss	10,845
4. Asset (gain)/loss	(53,744)
5. Change due to changes in assumptions, methods, and plan provisions	(5,246)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$29,739**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	12,304	98,959	12.43%	10,123	96,031	10.54%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$12,304**	**$98,959**	**12.43%**	**$10,123**	**$96,031**	**10.54%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$29,739	$68,356
2. Next year's Tier 1/Tier 2 UAL payment	2,153	4,359
3. Combined valuation payroll	236,893	223,782
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.91%	1.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.43%	10.54%
b. Tier 1/Tier 2 UAL rate	0.91%	1.95%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.47%	12.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	13.47%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.76%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.91%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.85%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.71%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.43%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.43%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.43%	10.54%
b. Tier 1/Tier 2 UAL rate	(0.85%)	1.04%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.71%	11.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$98,959	$0	$98,959
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	98,959	0	98,959
OPSRP valuation payroll	137,934	0	137,934
Combined valuation payroll	**$236,893**	**$0**	**$236,893**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	3	4	1	0	3	4
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	3	4	1	0	3	4
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	3	0	0	3	3	0	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	3	0	0	3	3	0	0	3
Grand Total Number of Members	**4**	**0**	**3**	**7**	**4**	**0**	**3**	**7**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44					1					**1**
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	1,373
65-69		
70-74		
75-79		
80-84	1	421
85-89		
90-94		
95-99		
100+		
Total	3	1,056

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Hermiston Rural Fire Protection District/2815
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Hermiston Rural Fire Protection District/2815

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Hermiston Rural Fire Protection District/2815

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Hermiston Rural Fire Protection District -- #2815

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Hermiston Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Hermiston Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Hermiston Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.25%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.31%	0.31%	0.31%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.16%**	**8.27%**	**12.37%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.72%**	**8.75%**	**12.85%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 88%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	12.56%	12.56%
Minimum July 1, 2015 Rate	9.56%	6.56%
Maximum July 1, 2015 Rate	15.56%	18.56%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,545,895	$2,765,065	$219,170	92%	$1,461,780	15%
12/31/2008	2,018,646	3,338,525	1,319,879	60%	1,576,005	84%
12/31/2009	2,571,679	3,104,973	533,294	83%	1,788,434	30%
12/31/2010	3,094,148	3,421,790	327,642	90%	1,825,539	18%
12/31/2011	3,353,245	3,852,024	498,779	87%	1,943,699	26%
12/31/2012	4,033,745	4,582,248	548,503	88%	2,169,710	25%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Hermiston Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$548,503	$498,779
Allocated pooled OPSRP UAL	152,927	33,164
Side account	0	0
Net unfunded pension actuarial accrued liability	701,430	531,943
Combined valuation payroll	2,169,710	1,943,699
Net pension UAL as a percentage of payroll	32%	27%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$45,521	$50,353

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$236,926	$192,868
Tier 1/Tier 2 valuation payroll	1,553,425	1,494,398
Tier 1/Tier 2 pension normal cost rate	15.25%	12.91%
Tier 1/ Tier 2 Actuarial accrued liability	$4,582,248	$3,852,024
Actuarial asset value	4,033,745	3,353,245
Tier 1/Tier 2 Unfunded actuarial accrued liability	548,503	498,779
Tier 1/ Tier 2 Funded status	88%	87%
Combined valuation payroll	$2,169,710	$1,943,699
Tier 1/Tier 2 UAL as a percentage of payroll	25%	26%
Tier 1/Tier 2 UAL rate	0.31%	2.15%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	17	17
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	7	7

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	2,169,710	1,943,699
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$464,039	$405,831
2. Employer reserves	3,176,348	2,552,535
3. Benefits in force reserve	393,358	394,880
4. Total market value of assets ***(1. + 2. + 3.)***	**$4,033,745**	**$3,353,245**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$3,353,245
2.	Regular employer contributions	226,590
3.	Benefit payments and expenses	(61,780)
4.	Adjustments[2]	19,666
5.	Interest credited	496,024
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$4,033,745**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$105,880	$83,703
Tier 1 General Service	9,380	242
Tier 2 Police & Fire	121,666	108,905
Tier 2 General Service	0	18
Total	**$236,926**	**$192,868**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$212,917	$236,926	$24,009

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$1,993,006	$1,681,988
▪ Tier 1 General Service	119,651	120,465
▪ Tier 2 Police & Fire	1,749,616	1,280,035
▪ Tier 2 General Service	30,244	25,270
▪ **Total Active Members**	**$3,892,517**	**$3,107,758**
Dormant Members	26,868	26,084
Retired Members and Beneficiaries	662,863	718,182
Total Actuarial Accrued Liability	**$4,582,248**	**$3,852,024**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$4,369,441	$4,582,248	$212,807

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$4,582,248	$3,852,024
2. Actuarial value of assets	4,033,745	3,353,245
3. Unfunded accrued liability *(1. – 2.)*	548,503	498,779
4. Funded percentage *(2. ÷ 1.)*	88%	87%
5. Combined valuation payroll	$2,169,710	$1,943,699
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	25%	26%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$548,503	$39,701
Total				**$548,503**	**$39,701**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$3,852,024
b. Normal cost at December 31, 2011	192,868
c. Benefit payments during 2012	(61,296)
d. Interest at 8.0% to December 31, 2012	321,140
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	4,304,736
f. Change in actuarial accrued liability due to assumption, method, and plan changes	212,807
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	4,517,543
2. Actuarial accrued liability at December 31, 2012	4,582,248
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(64,705)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	3,353,245
b. Contributions for 2012[1]	226,590
c. Benefit payments and expenses during 2012	(61,780)
d. Interest at 8.0% to December 31, 2012	274,852
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,792,908
5. Actuarial value of assets at December 31, 2012	4,033,745
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	240,838
7. Total actuarial gain/(loss) *(3. + 6.)*	**$176,133**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$498,779**
2. Expected increase	13,050
3. Liability (gain)/loss	64,705
4. Asset (gain)/loss	(240,838)
5. Change due to changes in assumptions, methods, and plan provisions	212,807
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$548,503**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$105,880	$649,547	16.30%	$83,703	$608,185	13.76%
Tier 1 General Service	9,380	60,847	15.42%	242	60,097	0.40%
Tier 2 Police & Fire	121,666	843,031	14.43%	108,905	825,958	13.19%
Tier 2 General Service	0	0	0.00%	18	158	11.39%
Total	**$236,926**	**$1,553,425**	**15.25%**	**$192,868**	**$1,494,398**	**12.91%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$548,503	$498,779
2. Next year's Tier 1/Tier 2 UAL payment	39,701	39,287
3. Combined valuation payroll	2,169,710	1,943,699
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.83%	2.02%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.25%	12.91%
b. Tier 1/Tier 2 UAL rate	1.83%	2.02%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.21%	15.06%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.56%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.56%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.51%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	88%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.56%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	15.56%
7. July 1, 2015 total pension rate, before adjustment	17.21%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.65%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.83%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.18%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	15.56%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.25%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.25%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.56%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.25%	12.91%
b. Tier 1/Tier 2 UAL rate	0.18%	2.02%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	15.56%	15.06%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$60,847	$649,547	$710,394
Tier 2	0	843,031	843,031
Tier 1/Tier 2 valuation payroll	60,847	1,492,578	1,553,425
OPSRP valuation payroll	34,964	581,321	616,285
Combined valuation payroll	**$95,811**	**$2,073,899**	**$2,169,710**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	1	2	1	0	1	2
Police & Fire	6	10	7	23	6	10	6	22
Total	7	10	8	25	7	10	7	24
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	3	N/A	4
Police & Fire	1	2	N/A	3	2	6	N/A	8
Total	2	2	N/A	4	3	9	N/A	12
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	1	0	0	1	1	0	0	1
Total	1	1	0	2	1	1	0	2
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	7	0	0	7	7	0	0	7
Total	7	0	0	7	7	0	0	7
Grand Total Number of Members	**17**	**13**	**8**	**38**	**18**	**20**	**7**	**45**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		1								1
35-39		1	1							2
40-44			4							4
45-49			1	1	3	2				7
50-54			1							1
55-59			1							1
60-64						1				1
65-69										
70-74										
75+										
Total	0	2	8	1	3	3	0	0	0	17

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	201
45-49	1	186
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	2	194

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	3	1,124
60-64	1	418
65-69	2	33
70-74	1	423
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	7	611

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Harbor Water PUD/2771
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Harbor Water PUD/2771

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Harbor Water PUD -- #2771

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Harbor Water PUD to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Harbor Water PUD.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Harbor Water PUD

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.97%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(5.40%)	(5.40%)	(5.40%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.17%**	**2.56%**	**6.66%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.73%**	**3.04%**	**7.14%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 119%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.57%	5.57%
Minimum July 1, 2015 Rate	2.57%	0.00%
Maximum July 1, 2015 Rate	8.57%	11.57%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$589,230	$415,659	($173,571)	142%	$236,805	(73%)
12/31/2008	488,851	453,510	(35,341)	108%	214,357	(16%)
12/31/2009	585,164	519,548	(65,616)	113%	244,669	(27%)
12/31/2010	661,768	565,410	(96,358)	117%	243,658	(40%)
12/31/2011	685,356	635,506	(49,850)	108%	241,212	(21%)
12/31/2012	796,837	667,827	(129,010)	119%	285,733	(45%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Harbor Water PUD

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($129,010)	($49,850)
Allocated pooled OPSRP UAL	20,139	4,116
Side account	0	0
Net unfunded pension actuarial accrued liability	(108,871)	(45,734)
Combined valuation payroll	285,733	241,212
Net pension UAL as a percentage of payroll	(38%)	(19%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$5,995	$6,249

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$32,775	$23,951
Tier 1/Tier 2 valuation payroll	234,536	235,794
Tier 1/Tier 2 pension normal cost rate	13.97%	10.16%
Tier 1/ Tier 2 Actuarial accrued liability	$667,827	$635,506
Actuarial asset value	796,837	685,356
Tier 1/Tier 2 Unfunded actuarial accrued liability	(129,010)	(49,850)
Tier 1/ Tier 2 Funded status	119%	108%
Combined valuation payroll	$285,733	$241,212
Tier 1/Tier 2 UAL as a percentage of payroll	(45%)	(21%)
Tier 1/Tier 2 UAL rate	(5.40%)	(2.09%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	285,733	241,212
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$215,602	$189,489
2. Employer reserves	553,867	469,352
3. Benefits in force reserve	27,368	26,516
4. Total market value of assets ***(1. + 2. + 3.)***	**$796,837**	**$685,356**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$685,356
2. Regular employer contributions	15,194
3. Benefit payments and expenses	(4,298)
4. Adjustments [2]	11,320
5. Interest credited	89,265
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$796,837**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	23,807	14,211
Tier 2 Police & Fire	0	0
Tier 2 General Service	8,968	9,740
Total	**$32,775**	**$23,951**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$24,410	$32,775	$8,365

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	513,509	495,132
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	108,200	92,149
▪ **Total Active Members**	**$621,709**	**$587,281**
Dormant Members	0	0
Retired Members and Beneficiaries	46,118	48,225
Total Actuarial Accrued Liability	**$667,827**	**$635,506**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$688,156	$667,827	($20,329)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$667,827	$635,506
2. Actuarial value of assets	796,837	685,356
3. Unfunded accrued liability *(1. – 2.)*	(129,010)	(49,850)
4. Funded percentage *(2. ÷ 1.)*	119%	108%
5. Combined valuation payroll	$285,733	$241,212
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(45%)	(21%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($129,010)	($9,338)
Total				**($129,010)**	**($9,338)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$635,506
b. Normal cost at December 31, 2011	23,951
c. Benefit payments during 2012	(4,265)
d. Interest at 8.0% to December 31, 2012	52,586
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	707,778
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(20,329)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	687,449
2. Actuarial accrued liability at December 31, 2012	667,827
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	19,622
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	685,356
b. Contributions for 2012[1]	15,194
c. Benefit payments and expenses during 2012	(4,298)
d. Interest at 8.0% to December 31, 2012	55,264
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	751,516
5. Actuarial value of assets at December 31, 2012	796,837
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	45,320
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$64,942**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($49,850)**
2. Expected increase	6,111
3. Liability (gain)/loss	(19,622)
4. Asset (gain)/loss	(45,320)
5. Change due to changes in assumptions, methods, and plan provisions	(20,329)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($129,010)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	23,807	165,178	14.41%	14,211	163,927	8.67%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	8,968	69,358	12.93%	9,740	71,867	13.55%
Total	**$32,775**	**$234,536**	**13.97%**	**$23,951**	**$235,794**	**10.16%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($129,010)	($49,850)
2. Next year's Tier 1/Tier 2 UAL payment	(9,338)	(5,356)
3. Combined valuation payroll	285,733	241,212
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.27%)	(2.22%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.97%	10.16%
b. Tier 1/Tier 2 UAL rate	(3.27%)	(2.22%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.83%	8.07%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.57%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.57%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.11%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	119%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.57%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.57%
7. July 1, 2015 total pension rate, before adjustment	10.83%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.26%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(3.27%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.53%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.57%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.97%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.97%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.57%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.97%	10.16%
b. Tier 1/Tier 2 UAL rate	(5.53%)	(2.22%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.57%	8.07%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$165,178	$0	$165,178
Tier 2	69,358	0	69,358
Tier 1/Tier 2 valuation payroll	234,536	0	234,536
OPSRP valuation payroll	51,197	0	51,197
Combined valuation payroll	**$285,733**	**$0**	**$285,733**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	2	5	2	1	1	4
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	2	5	2	1	1	4
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Grand Total Number of Members	**2**	**2**	**2**	**6**	**2**	**2**	**1**	**5**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54				1						1
55-59			1							1
60-64				1						1
65-69										
70-74										
75+										
Total	0	0	1	2	0	0	0	0	0	3

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	342
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	342

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Halsey Shedd Rural Fire Protection District/2698
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Halsey Shedd Rural Fire Protection District/2698

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Halsey Shedd Rural Fire Protection District -- #2698

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Halsey Shedd Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Halsey Shedd Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Halsey Shedd Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.88%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(8.47%)	(8.47%)	(8.47%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**0.00%**	**3.59%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**0.48%**	**4.07%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 127%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$499,296	$337,646	($161,650)	148%	$112,159	(144%)
12/31/2008	403,149	365,385	(37,764)	110%	117,247	(32%)
12/31/2009	476,525	409,622	(66,903)	116%	122,435	(55%)
12/31/2010	530,634	425,296	(105,338)	125%	81,326	(130%)
12/31/2011	547,694	449,945	(97,749)	122%	108,670	(90%)
12/31/2012	613,020	480,877	(132,143)	127%	139,713	(95%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Halsey Shedd Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($132,143)	($97,749)
Allocated pooled OPSRP UAL	9,847	1,854
Side account	0	0
Net unfunded pension actuarial accrued liability	(122,296)	(95,895)
Combined valuation payroll	139,713	108,670
Net pension UAL as a percentage of payroll	(88%)	(88%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,931	$2,815

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$14,457	$9,337
Tier 1/Tier 2 valuation payroll	85,662	82,762
Tier 1/Tier 2 pension normal cost rate	16.88%	13.38%
Tier 1/ Tier 2 Actuarial accrued liability	$480,877	$449,945
Actuarial asset value	613,020	547,694
Tier 1/Tier 2 Unfunded actuarial accrued liability	(132,143)	(97,749)
Tier 1/ Tier 2 Funded status	127%	122%
Combined valuation payroll	$139,713	$108,670
Tier 1/Tier 2 UAL as a percentage of payroll	(95%)	(90%)
Tier 1/Tier 2 UAL rate	(8.47%)	(7.97%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	2	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	139,713	108,670
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$139,023	$151,444
2. Employer reserves	421,146	368,194
3. Benefits in force reserve	52,851	28,056
4. Total market value of assets ***(1. + 2. + 3.)***	**$613,020**	**$547,694**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$547,694
2. Regular employer contributions	2,476
3. Benefit payments and expenses	(8,301)
4. Adjustments [2]	(74)
5. Interest credited	71,224
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$613,020**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$12,765	$7,709
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	1,692	1,628
Total	**$14,457**	**$9,337**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$10,747	$14,457	$3,710

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$346,139	$362,524
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	10,894	10,191
▪ Tier 2 General Service	34,783	26,204
▪ **Total Active Members**	**$391,816**	**$398,919**
Dormant Members	0	0
Retired Members and Beneficiaries	89,061	51,026
Total Actuarial Accrued Liability	**$480,877**	**$449,945**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$491,520	$480,877	($10,643)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$480,877	$449,945
2. Actuarial value of assets	613,020	547,694
3. Unfunded accrued liability *(1. – 2.)*	(132,143)	(97,749)
4. Funded percentage *(2. ÷ 1.)*	127%	122%
5. Combined valuation payroll	$139,713	$108,670
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(95%)	(90%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($132,143)	($9,564)
Total				**($132,143)**	**($9,564)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$449,945
b. Normal cost at December 31, 2011	9,337
c. Benefit payments during 2012	(8,236)
d. Interest at 8.0% to December 31, 2012	36,413
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	487,459
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(10,643)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	476,816
2. Actuarial accrued liability at December 31, 2012	480,877
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(4,061)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	547,694
b. Contributions for 2012[1]	2,476
c. Benefit payments and expenses during 2012	(8,301)
d. Interest at 8.0% to December 31, 2012	43,583
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	585,452
5. Actuarial value of assets at December 31, 2012	613,020
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	27,568
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$23,507**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($97,749)**
2. Expected increase	(244)
3. Liability (gain)/loss	4,061
4. Asset (gain)/loss	(27,568)
5. Change due to changes in assumptions, methods, and plan provisions	(10,643)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($132,143)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$12,765	$69,660	18.32%	$7,709	$67,300	11.45%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	1,692	16,002	10.57%	1,628	15,462	10.53%
Total	**$14,457**	**$85,662**	**16.88%**	**$9,337**	**$82,762**	**11.28%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($132,143)	($97,749)
2. Next year's Tier 1/Tier 2 UAL payment	(9,564)	(8,797)
3. Combined valuation payroll	139,713	108,670
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(6.85%)	(8.10%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.88%	11.28%
b. Tier 1/Tier 2 UAL rate	(6.85%)	(8.10%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.16%	3.31%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	127%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	10.16%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.75%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(6.85%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(8.60%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.88%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.88%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.88%	13.38%
b. Tier 1/Tier 2 UAL rate	(8.60%)	(8.10%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$69,660	$69,660
Tier 2	16,002	0	16,002
Tier 1/Tier 2 valuation payroll	16,002	69,660	85,662
OPSRP valuation payroll	0	54,051	54,051
Combined valuation payroll	**$16,002**	**$123,711**	**$139,713**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	1	0	1	2	1	0	1	2
Total	1	1	1	3	1	1	1	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	1	N/A	1	1	1	N/A	2
Total	0	1	N/A	1	1	1	N/A	2
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	0	0	2	1	0	0	1
Total	2	0	0	2	1	0	0	1
Grand Total Number of Members	**3**	**2**	**1**	**6**	**3**	**2**	**1**	**6**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54			1		1					2
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	1	0	1	0	0	0	0	2

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	256
70-74	1	276
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	266

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Gaston Rural Fire Protection District/2608
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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December 2013
Gaston Rural Fire Protection District/2608

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Gaston Rural Fire Protection District -- #2608

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Gaston Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Gaston Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Gaston Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.77%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.14%	0.14%	0.14%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.51%**	**8.10%**	**12.20%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.07%**	**8.58%**	**12.68%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 96%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.91%	10.91%
Minimum July 1, 2015 Rate	7.91%	4.91%
Maximum July 1, 2015 Rate	13.91%	16.91%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$404,178	$389,940	($14,237)	104%	$56,252	(25%)
12/31/2008	286,682	375,548	88,866	76%	95,337	93%
12/31/2009	323,110	371,017	47,907	87%	85,462	56%
12/31/2010	341,306	375,975	34,669	91%	100,211	35%
12/31/2011	330,317	371,521	41,204	89%	100,398	41%
12/31/2012	365,393	380,080	14,687	96%	101,729	14%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Gaston Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$14,687	$41,204
Allocated pooled OPSRP UAL	7,170	1,713
Side account	0	0
Net unfunded pension actuarial accrued liability	21,857	42,917
Combined valuation payroll	101,729	100,398
Net pension UAL as a percentage of payroll	21%	43%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,134	$2,601

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$42	$29
Tier 1/Tier 2 valuation payroll	305	224
Tier 1/Tier 2 pension normal cost rate	13.77%	12.95%
Tier 1/ Tier 2 Actuarial accrued liability	$380,080	$371,521
Actuarial asset value	365,393	330,317
Tier 1/Tier 2 Unfunded actuarial accrued liability	14,687	41,204
Tier 1/ Tier 2 Funded status	96%	89%
Combined valuation payroll	$101,729	$100,398
Tier 1/Tier 2 UAL as a percentage of payroll	14%	41%
Tier 1/Tier 2 UAL rate	0.14%	0.96%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	101,729	100,398
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$37,215	$31,991
2. Employer reserves	198,406	174,627
3. Benefits in force reserve	129,772	123,698
4. Total market value of assets ***(1. + 2. + 3.)***	**$365,393**	**$330,317**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$330,317
2.	Regular employer contributions	(1,007)
3.	Benefit payments and expenses	(20,382)
4.	Adjustments[2]	11,311
5.	Interest credited	45,154
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$365,393**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	36	24
Tier 2 Police & Fire	6	5
Tier 2 General Service	0	0
Total	**$42**	**$29**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$41	$42	$1

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$119,779	$115,283
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	30,787	28,053
▪ Tier 2 General Service	9,414	2,069
▪ **Total Active Members**	**$159,980**	**$145,405**
Dormant Members	1,417	1,142
Retired Members and Beneficiaries	218,683	224,974
Total Actuarial Accrued Liability	**$380,080**	**$371,521**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$379,415	$380,080	$665

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$380,080	$371,521
2. Actuarial value of assets	365,393	330,317
3. Unfunded accrued liability *(1. – 2.)*	14,687	41,204
4. Funded percentage *(2. ÷ 1.)*	96%	89%
5. Combined valuation payroll	$101,729	$100,398
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	14%	41%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$14,687	$1,063
Total				**$14,687**	**$1,063**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$371,521
b. Normal cost at December 31, 2011	29
c. Benefit payments during 2012	(20,222)
d. Interest at 8.0% to December 31, 2012	28,915
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	380,243
f. Change in actuarial accrued liability due to assumption, method, and plan changes	665
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	380,908
2. Actuarial accrued liability at December 31, 2012	380,080
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	828
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	330,317
b. Contributions for 2012[1]	(1,007)
c. Benefit payments and expenses during 2012	(20,382)
d. Interest at 8.0% to December 31, 2012	25,570
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	334,498
5. Actuarial value of assets at December 31, 2012	365,393
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	30,895
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$31,723**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$41,204**
2. Expected increase	4,541
3. Liability (gain)/loss	(828)
4. Asset (gain)/loss	(30,895)
5. Change due to changes in assumptions, methods, and plan provisions	665
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$14,687**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	36	265	13.58%	24	186	12.90%
Tier 2 Police & Fire	6	40	15.00%	5	38	13.16%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$42**	**$305**	**13.77%**	**$29**	**$224**	**12.95%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$14,687	$41,204
2. Next year's Tier 1/Tier 2 UAL payment	1,063	3,182
3. Combined valuation payroll	101,729	100,398
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.04%	3.17%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.77%	12.95%
b. Tier 1/Tier 2 UAL rate	1.04%	3.17%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.94%	16.25%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.91%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.91%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.18%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.91%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.91%
7. July 1, 2015 total pension rate, before adjustment	14.94%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.03%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.04%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.01%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.91%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.77%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.77%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.91%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.77%	12.95%
b. Tier 1/Tier 2 UAL rate	0.01%	0.83%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.91%	13.91%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$265	$0	$265
Tier 2	0	40	40
Tier 1/Tier 2 valuation payroll	265	40	305
OPSRP valuation payroll	17,563	83,861	101,424
Combined valuation payroll	**$17,828**	**$83,901**	**$101,729**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	2	2	0	0	2	2
Total	0	0	3	3	0	0	3	3
Active Members with previous service segments with the employer								
General Service	1	1	N/A	2	1	1	N/A	2
Police & Fire	3	0	N/A	3	3	1	N/A	4
Total	4	1	N/A	5	4	2	N/A	6
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	0	1	0	1
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	0	0	2	2	0	0	2
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**6**	**2**	**3**	**11**	**6**	**3**	**3**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	118
60-64		
65-69		
70-74		
75+		
Total	1	118

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	212
65-69		
70-74		
75-79		
80-84	1	2,048
85-89		
90-94		
95-99		
100+		
Total	2	1,130

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Fern Ridge Community Library/2785
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Fern Ridge Community Library/2785

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Fern Ridge Community Library/2785

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Fern Ridge Community Library -- #2785

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Fern Ridge Community Library to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Fern Ridge Community Library.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Fern Ridge Community Library

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.61%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(1.72%)	(1.72%)	(1.72%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.49%**	**6.24%**	**10.34%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.05%**	**6.72%**	**10.82%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 91%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	9.89%	9.89%
Minimum July 1, 2015 Rate	6.89%	3.89%
Maximum July 1, 2015 Rate	12.89%	15.89%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$323,375	$198,976	($124,399)	163%	$81,822	(152%)
12/31/2008	255,668	212,322	(43,346)	120%	129,190	(34%)
12/31/2009	309,834	243,714	(66,120)	127%	139,914	(47%)
12/31/2010	353,205	385,193	31,988	92%	181,132	18%
12/31/2011	368,747	416,146	47,399	89%	185,052	26%
12/31/2012	421,995	461,969	39,974	91%	175,148	23%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Fern Ridge Community Library

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$39,974	$47,399
Allocated pooled OPSRP UAL	12,345	3,157
Side account	0	0
Net unfunded pension actuarial accrued liability	52,319	50,556
Combined valuation payroll	175,148	185,052
Net pension UAL as a percentage of payroll	30%	27%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,675	$4,794

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$4,967	$8,512
Tier 1/Tier 2 valuation payroll	34,001	50,953
Tier 1/Tier 2 pension normal cost rate	14.61%	16.71%
Tier 1/ Tier 2 Actuarial accrued liability	$461,969	$416,146
Actuarial asset value	421,995	368,747
Tier 1/Tier 2 Unfunded actuarial accrued liability	39,974	47,399
Tier 1/ Tier 2 Funded status	91%	89%
Combined valuation payroll	$175,148	$185,052
Tier 1/Tier 2 UAL as a percentage of payroll	23%	26%
Tier 1/Tier 2 UAL rate	(1.72%)	(3.82%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	3	3
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	175,148	185,052
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$76,317	$66,235
2. Employer reserves	320,147	277,730
3. Benefits in force reserve	25,531	24,781
4. Total market value of assets ***(1. + 2. + 3.)***	**$421,995**	**$368,747**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$368,747
2. Regular employer contributions	2,428
3. Benefit payments and expenses	(4,010)
4. Adjustments[2]	4,246
5. Interest credited	50,584
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$421,995**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	4,967	4,566
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	3,946
Total	**$4,967**	**$8,512**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,275	$4,967	$692

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	327,786	286,049
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	37,558	32,966
▪ **Total Active Members**	**$365,344**	**$319,015**
Dormant Members	53,603	52,060
Retired Members and Beneficiaries	43,022	45,071
Total Actuarial Accrued Liability	**$461,969**	**$416,146**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$458,234	$461,969	$3,735

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$461,969	$416,146
2. Actuarial value of assets	421,995	368,747
3. Unfunded accrued liability *(1. – 2.)*	39,974	47,399
4. Funded percentage *(2. ÷ 1.)*	91%	89%
5. Combined valuation payroll	$175,148	$185,052
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	23%	26%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$39,974	$2,893
Total				**$39,974**	**$2,893**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$416,146
b. Normal cost at December 31, 2011	8,512
c. Benefit payments during 2012	(3,978)
d. Interest at 8.0% to December 31, 2012	33,814
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	454,494
f. Change in actuarial accrued liability due to assumption, method, and plan changes	3,735
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	458,229
2. Actuarial accrued liability at December 31, 2012	461,969
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(3,740)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	368,747
b. Contributions for 2012[1]	2,428
c. Benefit payments and expenses during 2012	(4,010)
d. Interest at 8.0% to December 31, 2012	29,436
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	396,601
5. Actuarial value of assets at December 31, 2012	421,995
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	25,394
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$21,654**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$47,399**
2. Expected increase	10,494
3. Liability (gain)/loss	3,740
4. Asset (gain)/loss	(25,394)
5. Change due to changes in assumptions, methods, and plan provisions	3,735
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$39,974**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	4,967	34,001	14.61%	4,566	32,506	14.05%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	3,946	18,447	21.39%
Total	**$4,967**	**$34,001**	**14.61%**	**$8,512**	**$50,953**	**16.71%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$39,974	$47,399
2. Next year's Tier 1/Tier 2 UAL payment	2,893	2,038
3. Combined valuation payroll	175,148	185,052
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.65%	1.10%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.61%	16.71%
b. Tier 1/Tier 2 UAL rate	1.65%	1.10%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.39%	17.94%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.89%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.89%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.98%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	91%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.89%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	12.89%
7. July 1, 2015 total pension rate, before adjustment	16.39%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.50%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.65%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.85%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.89%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.61%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.61%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.89%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.61%	16.71%
b. Tier 1/Tier 2 UAL rate	(1.85%)	(3.95%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.89%	12.89%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$34,001	$0	$34,001
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	34,001	0	34,001
OPSRP valuation payroll	141,147	0	141,147
Combined valuation payroll	**$175,148**	**$0**	**$175,148**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	4	7	2	1	4	7
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	4	7	2	1	4	7
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	1	0	N/A	1
Dormant Members								
General Service	2	1	0	3	2	1	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	0	3	2	1	0	3
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**5**	**2**	**4**	**11**	**6**	**2**	**4**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69				1						**1**
70-74			1							**1**
75+						1				**1**
Total	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**0**	**3**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	810
40-44		
45-49		
50-54	1	317
55-59	1	1
60-64		
65-69		
70-74		
75+		
Total	3	376

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	282
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	282

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Evans Valley Fire District #6/2623
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Evans Valley Fire District #6/2623

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS
Evans Valley Fire District #6 -- #2623

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Evans Valley Fire District #6 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Evans Valley Fire District #6.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Evans Valley Fire District #6

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.92%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(12.48%)	(12.48%)	(12.48%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**0.48%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 151%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$434,703	$227,833	($206,870)	191%	$78,449	(264%)
12/31/2008	391,338	247,861	(143,477)	158%	86,170	(167%)
12/31/2009	372,622	251,210	(121,412)	148%	47,547	(255%)
12/31/2010	412,333	270,024	(142,309)	153%	86,211	(165%)
12/31/2011	413,705	290,144	(123,561)	143%	90,266	(137%)
12/31/2012	463,790	306,995	(156,795)	151%	90,027	(174%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Evans Valley Fire District #6

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($156,795)	($123,561)
Allocated pooled OPSRP UAL	6,345	1,540
Side account	0	0
Net unfunded pension actuarial accrued liability	(150,450)	(122,021)
Combined valuation payroll	90,027	90,266
Net pension UAL as a percentage of payroll	(167%)	(135%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,889	$2,338

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$8,501	$8,975
Tier 1/Tier 2 valuation payroll	50,745	50,774
Tier 1/Tier 2 pension normal cost rate	17.92%	17.68%
Tier 1/ Tier 2 Actuarial accrued liability	$306,995	$290,144
Actuarial asset value	463,790	413,705
Tier 1/Tier 2 Unfunded actuarial accrued liability	(156,795)	(123,561)
Tier 1/ Tier 2 Funded status	151%	143%
Combined valuation payroll	$90,027	$90,266
Tier 1/Tier 2 UAL as a percentage of payroll	(174%)	(137%)
Tier 1/Tier 2 UAL rate	(12.48%)	(12.27%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	90,027	90,266
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$51,601	$44,850
2. Employer reserves	361,471	319,455
3. Benefits in force reserve	50,718	49,401
4. Total market value of assets *(1. + 2. + 3.)*	**$463,790**	**$413,705**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$413,705
2.	Regular employer contributions	(3,284)
3.	Benefit payments and expenses	(7,966)
4.	Adjustments [2]	3,215
5.	Interest credited	58,119
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$463,790**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	8,501	8,975
Tier 2 General Service	0	0
Total	**$8,501**	**$8,975**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$9,198	$8,501	($697)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$22,628	$25,444
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	167,477	145,525
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$190,105**	**$170,969**
Dormant Members	31,423	29,328
Retired Members and Beneficiaries	85,467	89,847
Total Actuarial Accrued Liability	**$306,995**	**$290,144**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$306,353	$306,995	$642

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$306,995	$290,144
2. Actuarial value of assets	463,790	413,705
3. Unfunded accrued liability *(1. – 2.)*	(156,795)	(123,561)
4. Funded percentage *(2. ÷ 1.)*	151%	143%
5. Combined valuation payroll	$90,027	$90,266
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(174%)	(137%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($156,795)	($11,349)
Total				**($156,795)**	**($11,349)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$290,144
b. Normal cost at December 31, 2011	8,975
c. Benefit payments during 2012	(7,903)
d. Interest at 8.0% to December 31, 2012	23,613
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	314,829
f. Change in actuarial accrued liability due to assumption, method, and plan changes	642
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	315,471
2. Actuarial accrued liability at December 31, 2012	306,995
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	8,476
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	413,705
b. Contributions for 2012[1]	(3,284)
c. Benefit payments and expenses during 2012	(7,966)
d. Interest at 8.0% to December 31, 2012	32,646
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	435,102
5. Actuarial value of assets at December 31, 2012	463,790
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	28,688
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$37,164**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($123,561)**
2. Expected increase	3,288
3. Liability (gain)/loss	(8,476)
4. Asset (gain)/loss	(28,688)
5. Change due to changes in assumptions, methods, and plan provisions	642
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($156,795)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	8,501	50,745	16.75%	8,975	50,774	17.68%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$8,501**	**$50,745**	**16.75%**	**$8,975**	**$50,774**	**17.68%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($156,795)	($123,561)
2. Next year's Tier 1/Tier 2 UAL payment	(11,349)	(11,197)
3. Combined valuation payroll	90,027	90,266
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(12.61%)	(12.40%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.75%	17.68%
b. Tier 1/Tier 2 UAL rate	(12.61%)	(12.40%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	4.27%	5.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	151%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	4.27%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(12.61%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(12.61%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	4.27%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	1.17%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.75%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.92%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.92%	17.68%
b. Tier 1/Tier 2 UAL rate	(12.61%)	(12.40%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	50,745	50,745
Tier 1/Tier 2 valuation payroll	0	50,745	50,745
OPSRP valuation payroll	0	39,282	39,282
Combined valuation payroll	**$0**	**$90,027**	**$90,027**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	1	2	0	1	1	2
Total	0	1	1	2	0	1	1	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	0	N/A	1	1	1	N/A	2
Total	1	0	N/A	1	1	1	N/A	2
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	0	1	0	1
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	0	0	2	2	0	0	2
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**3**	**2**	**1**	**6**	**3**	**3**	**1**	**7**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54				1						**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	685
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	685

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	449
60-64	1	51
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	250

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Eugene Water & Electric Board/2132
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Eugene Water & Electric Board/2132

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Eugene Water & Electric Board/2132

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Eugene Water & Electric Board -- #2132

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Eugene Water & Electric Board to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Eugene Water & Electric Board.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Eugene Water & Electric Board

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.46%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	12.34%	12.34%	12.34%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	(1.07%)	(1.07%)	(1.07%)
Net pension contribution rate	**24.33%**	**19.23%**	**23.33%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**24.89%**	**19.71%**	**23.81%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 76%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	23.82%	23.82%
Minimum July 1, 2015 Rate	19.06%	14.30%
Maximum July 1, 2015 Rate	28.58%	33.34%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$257,453,956	$278,160,157	$20,706,201	93%	$34,778,039	60%
12/31/2008	188,893,782	281,553,582	92,659,800	67%	35,686,738	260%
12/31/2009	208,718,948	290,442,448	81,723,500	72%	37,857,319	216%
12/31/2010	219,929,139	301,199,612	81,270,473	73%	40,283,981	202%
12/31/2011	212,836,317	306,418,228	93,581,912	69%	41,865,384	224%
12/31/2012	229,282,178	296,302,627	67,020,449	77%	42,796,406	157%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Eugene Water & Electric Board

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$72,170,199	$98,514,731
Allocated pooled OPSRP UAL	3,016,408	714,323
Side account	5,149,750	4,932,819
Net unfunded pension actuarial accrued liability	70,036,857	94,296,235
Combined valuation payroll	42,796,406	41,865,384
Net pension UAL as a percentage of payroll	164%	225%
Calculated side account rate relief	(1.07%)	(1.01%)
Allocated pooled RHIA UAL	$897,887	$1,084,544

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$2,766,344	$1,933,416
Tier 1/Tier 2 valuation payroll	22,210,381	24,199,803
Tier 1/Tier 2 pension normal cost rate	12.46%	7.99%
Tier 1/ Tier 2 Actuarial accrued liability	$296,302,627	$306,418,228
Actuarial asset value	224,132,428	207,903,497
Tier 1/Tier 2 Unfunded actuarial accrued liability	72,170,199	98,514,731
Tier 1/ Tier 2 Funded status	76%	68%
Combined valuation payroll	$42,796,406	$41,865,384
Tier 1/Tier 2 UAL as a percentage of payroll	169%	235%
Tier 1/Tier 2 UAL rate	12.34%	18.93%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	245	282
Tier 1/Tier 2 dormant members	81	74
Tier 1/Tier 2 retirees and beneficiaries	583	557

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**	**$4,932,819**	**$4,932,819**
2. Deposits made during 2012		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2012		(474,588)	(474,588)
5. Side account earnings during 2012		692,519	692,519
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***		**$5,149,750**	**$5,149,750**

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$5,149,750	$4,932,819
Side account 2	0	0
Side account 3	0	0
Total	**$5,149,750**	**$4,932,819**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$5,149,750	$4,932,819
2. Combined valuation payroll	42,796,406	41,865,384
3. Amortization factor	11.272	11.626
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	(1.07%)	(1.01%)

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$21,935,219	$24,017,019
2. Employer reserves	68,480,946	58,604,134
3. Benefits in force reserve	133,716,263	125,282,345
4. Total market value of assets *(1. + 2. + 3.)*	**$224,132,428**	**$207,903,497**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$207,903,497
2. Regular employer contributions	8,483,630
3. Benefit payments and expenses	(21,001,087)
4. Adjustments[2]	362,312
5. Interest credited	27,909,488
6. Total transferred from side accounts	474,588
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$224,132,428**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	1,490,397	637,519
Tier 2 Police & Fire	0	0
Tier 2 General Service	1,275,947	1,295,897
Total	**$2,766,344**	**$1,933,416**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$2,041,582	$2,766,344	$724,762

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	35,241,221	51,029,269
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	18,016,679	13,531,405
▪ **Total Active Members**	**$53,257,900**	**$64,560,674**
Dormant Members	17,714,360	14,002,027
Retired Members and Beneficiaries	225,330,367	227,855,527
Total Actuarial Accrued Liability	**$296,302,627**	**$306,418,228**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$314,118,200	$296,302,627	($17,815,573)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$296,302,627	$306,418,228
2. Actuarial value of assets	224,132,428	207,903,497
3. Unfunded accrued liability *(1. – 2.)*	72,170,199	98,514,731
4. Funded percentage *(2. ÷ 1.)*	76%	68%
5. Combined valuation payroll	$42,796,406	$41,865,384
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	169%	235%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$72,170,199	$5,223,668
Total				**$72,170,199**	**$5,223,668**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$306,418,228
b. Normal cost at December 31, 2011	1,933,416
c. Benefit payments during 2012	(20,836,692)
d. Interest at 8.0% to December 31, 2012	23,834,664
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	311,349,616
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(17,815,573)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	293,534,043
2. Actuarial accrued liability at December 31, 2012	296,302,627
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(2,768,584)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	207,903,497
b. Contributions for 2012[1]	8,958,217
c. Benefit payments and expenses during 2012	(21,001,087)
d. Interest at 8.0% to December 31, 2012	16,150,565
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	212,011,192
5. Actuarial value of assets at December 31, 2012	224,132,428
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	12,121,235
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$9,352,651**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$98,514,731**
2. Expected increase	823,692
3. Liability (gain)/loss	2,768,584
4. Asset (gain)/loss	(12,121,235)
5. Change due to changes in assumptions, methods, and plan provisions	(17,815,573)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$72,170,199**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	1,490,397	9,903,941	15.05%	637,519	11,902,737	5.36%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	1,275,947	12,306,440	10.37%	1,295,897	12,297,066	10.54%
Total	**$2,766,344**	**$22,210,381**	**12.46%**	**$1,933,416**	**$24,199,803**	**7.99%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$72,170,199	$98,514,731
2. Next year's Tier 1/Tier 2 UAL payment	5,223,668	7,871,426
3. Combined valuation payroll	42,796,406	41,865,384
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	12.21%	18.80%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.46%	7.99%
b. Tier 1/Tier 2 UAL rate	12.21%	18.80%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	24.80%	26.92%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	22.81%
2. Employer contribution rate attributable to side accounts	(1.01%)
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	23.82%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	4.76%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	4.76%
c. Funded percentage	76%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	4.76%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	19.06%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	28.58%
7. July 1, 2015 total pension rate, before adjustment	24.80%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	12.21%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	12.21%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	24.80%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.46%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.46%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	24.80%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.46%	7.99%
b. Tier 1/Tier 2 UAL rate	12.21%	18.80%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	24.80%	26.92%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$9,903,941	$0	$9,903,941
Tier 2	12,306,440	0	12,306,440
Tier 1/Tier 2 valuation payroll	22,210,381	0	22,210,381
OPSRP valuation payroll	20,586,025	0	20,586,025
Combined valuation payroll	**$42,796,406**	**$0**	**$42,796,406**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	106	139	274	519	135	147	255	537
Police & Fire	0	0	0	0	0	0	0	0
Total	106	139	274	519	135	147	255	537
Active Members with previous service segments with the employer								
General Service	5	4	N/A	9	10	8	N/A	18
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	5	4	N/A	9	10	8	N/A	18
Dormant Members								
General Service	54	27	21	102	46	28	8	82
Police & Fire	0	0	0	0	0	0	0	0
Total	54	27	21	102	46	28	8	82
Retired Members and Beneficiaries								
General Service	542	39	5	586	528	27	1	556
Police & Fire	2	0	0	2	2	0	0	2
Total	544	39	5	588	530	27	1	558
Grand Total Number of Members	**709**	**209**	**300**	**1,218**	**721**	**210**	**264**	**1,195**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		5	4							**9**
35-39		3	12		1					**16**
40-44	1	5	18	6	1					**31**
45-49		1	23	9	6	2				**41**
50-54		2	16	12	13	14	1			**58**
55-59		4	19	16	11	10	3			**63**
60-64		1	5	6	7	2	1	1		**23**
65-69		1	2				1			**4**
70-74										
75+										
Total	**1**	**22**	**99**	**49**	**39**	**28**	**6**	**1**	**0**	**245**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	3	1,471
40-44	7	1,699
45-49	10	1,902
50-54	20	2,650
55-59	27	2,185
60-64	12	1,616
65-69	1	4,689
70-74	1	2,073
75+		
Total	81	2,142

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49	3	1,573
50-54	10	4,139
55-59	69	3,290
60-64	143	3,471
65-69	108	3,224
70-74	89	3,096
75-79	40	2,741
80-84	34	2,244
85-89	53	1,648
90-94	27	1,182
95-99	5	645
100+	2	746
Total	583	2,921

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Estacada Cemetery District/2618
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Estacada Cemetery District/2618

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Estacada Cemetery District/2618

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Estacada Cemetery District -- #2618

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Estacada Cemetery District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Estacada Cemetery District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Estacada Cemetery District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	18.61%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(13.17%)	(13.17%)	(13.17%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**0.48%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 432%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$232,115	$45,842	($186,273)	506%	$42,129	(442%)
12/31/2008	171,253	55,968	(115,285)	306%	42,940	(268%)
12/31/2009	205,540	51,404	(154,136)	400%	45,227	(341%)
12/31/2010	229,923	58,666	(171,257)	392%	48,044	(356%)
12/31/2011	235,178	60,314	(174,864)	390%	54,019	(324%)
12/31/2012	268,608	62,221	(206,387)	432%	51,551	(400%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Estacada Cemetery District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($206,387)	($174,864)
Allocated pooled OPSRP UAL	3,633	922
Side account	0	0
Net unfunded pension actuarial accrued liability	(202,754)	(173,942)
Combined valuation payroll	51,551	54,019
Net pension UAL as a percentage of payroll	(393%)	(322%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,082	$1,399

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$1,028	$444
Tier 1/Tier 2 valuation payroll	7,808	8,461
Tier 1/Tier 2 pension normal cost rate	18.61%	10.66%
Tier 1/ Tier 2 Actuarial accrued liability	$62,221	$60,314
Actuarial asset value	268,608	235,178
Tier 1/Tier 2 Unfunded actuarial accrued liability	(206,387)	(174,864)
Tier 1/ Tier 2 Funded status	432%	390%
Combined valuation payroll	$51,551	$54,019
Tier 1/Tier 2 UAL as a percentage of payroll	(400%)	(324%)
Tier 1/Tier 2 UAL rate	(13.17%)	(5.25%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	51,551	54,019
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$26,661	$23,128
2. Employer reserves	241,947	212,050
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$268,608**	**$235,178**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$235,178
2.	Regular employer contributions	(435)
3.	Benefit payments and expenses	0
4.	Adjustments[2]	217
5.	Interest credited	33,648
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$268,608**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	1,028	444
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$1,028**	**$444**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$386	$1,028	$642

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	14,595	15,966
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$14,595**	**$15,966**
Dormant Members	47,626	44,348
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$62,221**	**$60,314**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$66,065	$62,221	($3,844)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$62,221	$60,314
2. Actuarial value of assets	268,608	235,178
3. Unfunded accrued liability *(1. – 2.)*	(206,387)	(174,864)
4. Funded percentage *(2. ÷ 1.)*	432%	390%
5. Combined valuation payroll	$51,551	$54,019
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(400%)	(324%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($206,387)	($14,938)
Total				**($206,387)**	**($14,938)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$60,314
b. Normal cost at December 31, 2011	444
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	4,861
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	65,619
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(3,844)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	61,775
2. Actuarial accrued liability at December 31, 2012	62,221
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(446)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	235,178
b. Contributions for 2012[1]	(435)
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	18,797
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	253,540
5. Actuarial value of assets at December 31, 2012	268,608
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	15,068
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$14,622**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($174,864)**
2. Expected increase	(13,057)
3. Liability (gain)/loss	446
4. Asset (gain)/loss	(15,068)
5. Change due to changes in assumptions, methods, and plan provisions	(3,844)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($206,387)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	1,028	7,808	13.17%	444	8,461	5.25%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$1,028**	**$7,808**	**13.17%**	**$444**	**$8,461**	**5.25%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($206,387)	($174,864)
2. Next year's Tier 1/Tier 2 UAL payment	(14,938)	(14,993)
3. Combined valuation payroll	51,551	54,019
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(28.98%)	(27.76%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.17%	5.25%
b. Tier 1/Tier 2 UAL rate	(28.98%)	(27.76%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	(15.68%)	(22.38%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	432%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	(15.68%)
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	15.68%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(28.98%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(13.30%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	0.00%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	5.44%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.17%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	18.61%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.61%	10.66%
b. Tier 1/Tier 2 UAL rate	(13.30%)	(5.38%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$7,808	$0	$7,808
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	7,808	0	7,808
OPSRP valuation payroll	43,743	0	43,743
Combined valuation payroll	**$51,551**	**$0**	**$51,551**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	1	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	1	0	N/A	1
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**1**	**1**	**2**	**1**	**1**	**1**	**3**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	493
60-64		
65-69		
70-74		
75+		
Total	1	493

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

East Fork Irrigation District/2529
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
East Fork Irrigation District/2529

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA	Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary	Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

East Fork Irrigation District -- #2529

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for East Fork Irrigation District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to East Fork Irrigation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for East Fork Irrigation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.57%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(4.83%)	(4.83%)	(4.83%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.34%**	**3.13%**	**7.23%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.90%**	**3.61%**	**7.71%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 108%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	7.74%	7.74%
Minimum July 1, 2015 Rate	4.74%	1.74%
Maximum July 1, 2015 Rate	10.74%	13.74%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,240,386	$1,088,284	($152,102)	114%	$220,159	(69%)
12/31/2008	1,025,313	1,170,231	144,918	88%	230,228	63%
12/31/2009	1,189,617	1,242,347	52,730	96%	237,201	22%
12/31/2010	1,316,959	1,352,279	35,320	97%	243,351	15%
12/31/2011	1,369,662	1,464,619	94,957	94%	247,525	38%
12/31/2012	1,574,498	1,451,273	(123,225)	108%	253,094	(49%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

East Fork Irrigation District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($123,225)	$94,957
Allocated pooled OPSRP UAL	17,839	4,223
Side account	0	0
Net unfunded pension actuarial accrued liability	(105,386)	99,180
Combined valuation payroll	253,094	247,525
Net pension UAL as a percentage of payroll	(42%)	40%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$5,310	$6,412

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$39,415	$19,098
Tier 1/Tier 2 valuation payroll	253,094	247,525
Tier 1/Tier 2 pension normal cost rate	15.57%	7.72%
Tier 1/ Tier 2 Actuarial accrued liability	$1,451,273	$1,464,619
Actuarial asset value	1,574,498	1,369,662
Tier 1/Tier 2 Unfunded actuarial accrued liability	(123,225)	94,957
Tier 1/ Tier 2 Funded status	108%	94%
Combined valuation payroll	$253,094	$247,525
Tier 1/Tier 2 UAL as a percentage of payroll	(49%)	38%
Tier 1/Tier 2 UAL rate	(4.83%)	2.52%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	6	6
Tier 1/Tier 2 dormant members	2	1
Tier 1/Tier 2 retirees and beneficiaries	4	4

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	253,094	247,525
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$542,637	$476,308
2. Employer reserves	939,021	802,417
3. Benefits in force reserve	92,840	90,937
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,574,498**	**$1,369,662**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,369,662
2. Regular employer contributions	18,904
3. Benefit payments and expenses	(14,581)
4. Adjustments [2]	27,824
5. Interest credited	172,690
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,574,498**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	22,679	2,219
Tier 2 Police & Fire	0	0
Tier 2 General Service	16,736	16,879
Total	**$39,415**	**$19,098**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$19,567	$39,415	$19,848

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	778,497	884,484
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	304,978	250,838
▪ **Total Active Members**	**$1,083,475**	**$1,135,322**
Dormant Members	211,349	163,908
Retired Members and Beneficiaries	156,449	165,389
Total Actuarial Accrued Liability	**$1,451,273**	**$1,464,619**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,569,688	$1,451,273	($118,415)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,451,273	$1,464,619
2. Actuarial value of assets	1,574,498	1,369,662
3. Unfunded accrued liability *(1. – 2.)*	(123,225)	94,957
4. Funded percentage *(2. ÷ 1.)*	108%	94%
5. Combined valuation payroll	$253,094	$247,525
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(49%)	38%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($123,225)	($8,919)
Total				**($123,225)**	**($8,919)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,464,619
b. Normal cost at December 31, 2011	19,098
c. Benefit payments during 2012	(14,467)
d. Interest at 8.0% to December 31, 2012	118,119
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,587,369
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(118,415)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,468,954
2. Actuarial accrued liability at December 31, 2012	1,451,273
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	17,681
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,369,662
b. Contributions for 2012[1]	18,904
c. Benefit payments and expenses during 2012	(14,581)
d. Interest at 8.0% to December 31, 2012	109,746
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,483,730
5. Actuarial value of assets at December 31, 2012	1,574,498
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	90,768
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$108,449**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$94,957**
2. Expected increase	8,682
3. Liability (gain)/loss	(17,681)
4. Asset (gain)/loss	(90,768)
5. Change due to changes in assumptions, methods, and plan provisions	(118,415)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($123,225)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	22,679	113,640	19.96%	2,219	111,457	1.99%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	16,736	139,454	12.00%	16,879	136,068	12.40%
Total	**$39,415**	**$253,094**	**15.57%**	**$19,098**	**$247,525**	**7.72%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($123,225)	$94,957
2. Next year's Tier 1/Tier 2 UAL payment	(8,919)	5,925
3. Combined valuation payroll	253,094	247,525
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.52%)	2.39%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.57%	7.72%
b. Tier 1/Tier 2 UAL rate	(3.52%)	2.39%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	12.18%	10.24%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	7.74%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	7.74%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.55%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	108%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	4.74%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	10.74%
7. July 1, 2015 total pension rate, before adjustment	12.18%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.44%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(3.52%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(4.96%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	10.74%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.57%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.57%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.74%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.57%	7.72%
b. Tier 1/Tier 2 UAL rate	(4.96%)	2.39%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.74%	10.24%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$113,640	$0	$113,640
Tier 2	139,454	0	139,454
Tier 1/Tier 2 valuation payroll	253,094	0	253,094
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$253,094**	**$0**	**$253,094**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	4	0	6	2	4	0	6
Police & Fire	0	0	0	0	0	0	0	0
Total	2	4	0	6	2	4	0	6
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	3	0	N/A	3
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	3	0	N/A	3
Dormant Members								
General Service	2	0	0	2	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	1	0	0	1
Retired Members and Beneficiaries								
General Service	4	0	0	4	4	0	0	4
Police & Fire	0	0	0	0	0	0	0	0
Total	4	0	0	4	4	0	0	4
Grand Total Number of Members	**8**	**4**	**0**	**12**	**10**	**4**	**0**	**14**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49				1						**1**
50-54					1					**1**
55-59							1			**1**
60-64			2							**2**
65-69			1							**1**
70-74										
75+										
Total	**0**	**0**	**3**	**1**	**1**	**0**	**1**	**0**	**0**	**6**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	2,076
55-59	1	321
60-64		
65-69		
70-74		
75+		
Total	2	1,198

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79	3	430
80-84	1	621
85-89		
90-94		
95-99		
100+		
Total	4	477

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Douglas Soil & Water Conservation District/2743
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Douglas Soil & Water Conservation District/2743

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Douglas Soil & Water Conservation District/2743

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Douglas Soil & Water Conservation District -- #2743

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Douglas Soil & Water Conservation District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Douglas Soil & Water Conservation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Douglas Soil & Water Conservation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	19.90%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(8.49%)	(8.49%)	(8.49%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.01%**	**0.00%**	**3.57%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.57%**	**0.48%**	**4.05%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 163%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$364,906	$313,752	($51,154)	116%	$180,479	(28%)
12/31/2008	308,455	313,693	5,238	98%	131,422	4%
12/31/2009	386,599	391,303	4,704	99%	210,437	2%
12/31/2010	453,715	393,860	(59,855)	115%	189,449	(32%)
12/31/2011	486,244	424,745	(61,499)	114%	242,761	(25%)
12/31/2012	577,655	353,317	(224,338)	163%	225,262	(100%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Douglas Soil & Water Conservation District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($224,338)	($61,499)
Allocated pooled OPSRP UAL	15,877	4,142
Side account	0	0
Net unfunded pension actuarial accrued liability	(208,461)	(57,357)
Combined valuation payroll	225,262	242,761
Net pension UAL as a percentage of payroll	(93%)	(24%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$4,726	$6,289

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$14,836	$5,855
Tier 1/Tier 2 valuation payroll	74,564	100,739
Tier 1/Tier 2 pension normal cost rate	19.90%	5.81%
Tier 1/ Tier 2 Actuarial accrued liability	$353,317	$424,745
Actuarial asset value	577,655	486,244
Tier 1/Tier 2 Unfunded actuarial accrued liability	(224,338)	(61,499)
Tier 1/ Tier 2 Funded status	163%	114%
Combined valuation payroll	$225,262	$242,761
Tier 1/Tier 2 UAL as a percentage of payroll	(100%)	(25%)
Tier 1/Tier 2 UAL rate	(8.49%)	1.72%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	4	3
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	225,262	242,761
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$167,864	$145,322
2. Employer reserves	409,791	340,922
3. Benefits in force reserve	0	0
4. Total market value of assets *(1. + 2. + 3.)*	**$577,655**	**$486,244**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$486,244
2.	Regular employer contributions	17,591
3.	Benefit payments and expenses	0
4.	Adjustments[2]	5,845
5.	Interest credited	67,975
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$577,655**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	8,394	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	6,442	5,855
Total	**$14,836**	**$5,855**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,566	$14,836	$10,270

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	209,288	296,563
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	64,739	66,858
▪ **Total Active Members**	**$274,027**	**$363,421**
Dormant Members	79,290	61,324
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$353,317**	**$424,745**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$434,296	$353,317	($80,979)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$353,317	$424,745
2. Actuarial value of assets	577,655	486,244
3. Unfunded accrued liability *(1. – 2.)*	(224,338)	(61,499)
4. Funded percentage *(2. ÷ 1.)*	163%	114%
5. Combined valuation payroll	$225,262	$242,761
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(100%)	(25%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($224,338)	($16,238)
Total				**($224,338)**	**($16,238)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$424,745
b. Normal cost at December 31, 2011	5,855
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	34,448
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	465,048
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(80,979)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	384,069
2. Actuarial accrued liability at December 31, 2012	353,317
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	30,752
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	486,244
b. Contributions for 2012[1]	17,591
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	39,603
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	543,438
5. Actuarial value of assets at December 31, 2012	577,655
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	34,217
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$64,969**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($61,499)**
2. Expected increase	(16,891)
3. Liability (gain)/loss	(30,752)
4. Asset (gain)/loss	(34,217)
5. Change due to changes in assumptions, methods, and plan provisions	(80,979)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($224,338)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	8,394	53,495	15.69%	0	52,785	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	6,442	21,069	30.58%	5,855	47,954	12.21%
Total	**$14,836**	**$74,564**	**19.90%**	**$5,855**	**$100,739**	**5.81%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($224,338)	($61,499)
2. Next year's Tier 1/Tier 2 UAL payment	(16,238)	(5,367)
3. Combined valuation payroll	225,262	242,761
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(7.21%)	(2.21%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.90%	5.81%
b. Tier 1/Tier 2 UAL rate	(7.21%)	(2.21%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	12.82%	3.73%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	163%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	12.82%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.41%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(7.21%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(8.62%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	19.90%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	19.90%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.90%	5.81%
b. Tier 1/Tier 2 UAL rate	(8.62%)	1.59%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.41%	7.53%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$53,495	$0	$53,495
Tier 2	21,069	0	21,069
Tier 1/Tier 2 valuation payroll	74,564	0	74,564
OPSRP valuation payroll	150,698	0	150,698
Combined valuation payroll	**$225,262**	**$0**	**$225,262**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	1	4	6	1	1	4	6
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	4	6	1	1	4	6
Active Members with previous service segments with the employer								
General Service	1	1	N/A	2	4	1	N/A	5
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	1	N/A	2	4	1	N/A	5
Dormant Members								
General Service	1	3	0	4	0	3	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	3	0	4	0	3	0	3
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**3**	**5**	**4**	**12**	**5**	**5**	**4**	**14**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54					1					**1**
55-59										
60-64										
65-69		1								**1**
70-74										
75+										
Total	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	2	710
45-49	1	197
50-54		
55-59		
60-64		
65-69	1	551
70-74		
75+		
Total	4	542

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Douglas County/2003
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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December 2013
Douglas County/2003

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Douglas County/2003

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Douglas County -- #2003

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Douglas County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Douglas County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Douglas County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.75%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	9.19%	9.19%	9.19%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**26.54%**	**17.15%**	**21.25%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**27.10%**	**17.63%**	**21.73%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 83%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	21.62%	21.62%
Minimum July 1, 2015 Rate	17.30%	12.98%
Maximum July 1, 2015 Rate	25.94%	30.26%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$265,911,022	$277,239,311	$11,328,289	96%	$32,299,241	35%
12/31/2008	201,654,842	285,001,578	83,346,736	71%	31,295,331	266%
12/31/2009	226,064,086	295,167,317	69,103,231	77%	30,664,936	225%
12/31/2010	237,499,259	305,065,495	67,566,236	78%	31,655,167	213%
12/31/2011	228,167,624	308,521,151	80,353,527	74%	29,880,985	269%
12/31/2012	248,078,897	298,085,583	50,006,686	83%	30,384,722	165%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Douglas County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$50,006,686	$80,353,527
Allocated pooled OPSRP UAL	2,141,599	509,841
Side account	0	0
Net unfunded pension actuarial accrued liability	52,148,285	80,863,368
Combined valuation payroll	30,384,722	29,880,985
Net pension UAL as a percentage of payroll	172%	271%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$637,484	$774,082

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$3,018,384	$1,608,019
Tier 1/Tier 2 valuation payroll	18,018,581	18,765,195
Tier 1/Tier 2 pension normal cost rate	16.75%	8.57%
Tier 1/ Tier 2 Actuarial accrued liability	$298,085,583	$308,521,151
Actuarial asset value	248,078,897	228,167,624
Tier 1/Tier 2 Unfunded actuarial accrued liability	50,006,686	80,353,527
Tier 1/ Tier 2 Funded status	83%	74%
Combined valuation payroll	$30,384,722	$29,880,985
Tier 1/Tier 2 UAL as a percentage of payroll	165%	269%
Tier 1/Tier 2 UAL rate	9.19%	17.45%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	357	395
Tier 1/Tier 2 dormant members	269	263
Tier 1/Tier 2 retirees and beneficiaries	1,054	1,013

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	30,384,722	29,880,985
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$40,356,041	$39,171,126
2. Employer reserves	92,550,951	81,063,576
3. Benefits in force reserve	115,171,905	107,932,922
4. Total market value of assets *(1. + 2. + 3.)*	**$248,078,897**	**$228,167,624**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$228,167,624
2.	Regular employer contributions	5,246,101
3.	Benefit payments and expenses	(18,088,564)
4.	Adjustments[2]	3,040,209
5.	Interest credited	29,713,527
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$248,078,897**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$471,545	$404,223
Tier 1 General Service	1,577,080	250,606
Tier 2 Police & Fire	369,640	323,140
Tier 2 General Service	600,119	630,050
Total	**$3,018,384**	**$1,608,019**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$1,682,685	$3,018,384	$1,335,699

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$13,847,840	$13,250,875
▪ Tier 1 General Service	49,113,003	61,094,196
▪ Tier 2 Police & Fire	5,899,533	4,444,643
▪ Tier 2 General Service	11,294,626	9,410,422
▪ **Total Active Members**	**$80,155,002**	**$88,200,136**
Dormant Members	23,850,017	24,019,511
Retired Members and Beneficiaries	194,080,564	196,301,504
Total Actuarial Accrued Liability	**$298,085,583**	**$308,521,151**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$317,644,660	$298,085,583	($19,559,077)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$298,085,583	$308,521,151
2. Actuarial value of assets	248,078,897	228,167,624
3. Unfunded accrued liability *(1. – 2.)*	50,006,686	80,353,527
4. Funded percentage *(2. ÷ 1.)*	83%	74%
5. Combined valuation payroll	$30,384,722	$29,880,985
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	165%	269%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$50,006,686	$3,619,476
Total				**$50,006,686**	**$3,619,476**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$308,521,151
b. Normal cost at December 31, 2011	1,608,019
c. Benefit payments during 2012	(17,946,969)
d. Interest at 8.0% to December 31, 2012	24,092,455
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	316,274,656
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(19,559,077)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	296,715,579
2. Actuarial accrued liability at December 31, 2012	298,085,583
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,370,004)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	228,167,624
b. Contributions for 2012[1]	5,246,101
c. Benefit payments and expenses during 2012	(18,088,564)
d. Interest at 8.0% to December 31, 2012	17,739,711
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	233,064,872
5. Actuarial value of assets at December 31, 2012	248,078,897
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	15,014,025
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$13,644,021**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$80,353,527**
2. Expected increase	2,856,257
3. Liability (gain)/loss	1,370,004
4. Asset (gain)/loss	(15,014,025)
5. Change due to changes in assumptions, methods, and plan provisions	(19,559,077)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$50,006,686**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$471,545	$2,527,049	18.66%	$404,223	$2,610,813	15.48%
Tier 1 General Service	1,577,080	7,823,628	20.16%	250,606	8,343,185	3.00%
Tier 2 Police & Fire	369,640	2,243,700	16.47%	323,140	2,038,542	15.85%
Tier 2 General Service	600,119	5,424,204	11.06%	630,050	5,772,655	10.91%
Total	**$3,018,384**	**$18,018,581**	**16.75%**	**$1,608,019**	**$18,765,195**	**8.57%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$50,006,686	$80,353,527
2. Next year's Tier 1/Tier 2 UAL payment	3,619,476	6,327,531
3. Combined valuation payroll	30,384,722	29,880,985
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	11.91%	21.18%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.75%	8.57%
b. Tier 1/Tier 2 UAL rate	11.91%	21.18%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	28.79%	29.88%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	21.62%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	21.62%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	4.32%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	4.32%
	c. Funded percentage	83%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	4.32%
5.	July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	17.30%
6.	July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	25.94%
7.	July 1, 2015 total pension rate, before adjustment	28.79%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.85%)
9.	July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	11.91%
10.	July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	9.06%
11.	July 1, 2015 Tier 1/Tier 2 pension rate, after collar	25.94%
12.	Tier 1/Tier 2 retiree healthcare rate	0.56%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.75%
15.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.75%
16.	July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	25.94%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.75%	8.57%
b. Tier 1/Tier 2 UAL rate	9.06%	17.32%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	25.94%	26.02%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$7,823,628	$2,527,049	$10,350,677
Tier 2	5,424,204	2,243,700	7,667,904
Tier 1/Tier 2 valuation payroll	13,247,832	4,770,749	18,018,581
OPSRP valuation payroll	10,201,958	2,164,183	12,366,141
Combined valuation payroll	**$23,449,790**	**$6,934,932**	**$30,384,722**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	163	127	287	577	180	145	287	612
Police & Fire	35	32	38	105	39	31	45	115
Total	198	159	325	682	219	176	332	727
Active Members with previous service segments with the employer								
General Service	96	66	N/A	162	126	88	N/A	214
Police & Fire	11	17	N/A	28	15	21	N/A	36
Total	107	83	N/A	190	141	109	N/A	250
Dormant Members								
General Service	137	107	25	269	137	105	24	266
Police & Fire	14	11	3	28	14	7	2	23
Total	151	118	28	297	151	112	26	289
Retired Members and Beneficiaries								
General Service	851	52	3	906	821	44	3	868
Police & Fire	141	10	0	151	138	10	0	148
Total	992	62	3	1,057	959	54	3	1,016
Grand Total Number of Members	**1,448**	**422**	**356**	**2,226**	**1,470**	**451**	**361**	**2,282**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		2	4							**6**
35-39		5	19	2						**26**
40-44		6	12	15	5					**38**
45-49		9	15	10	14	4				**52**
50-54		3	20	9	19	8	2	1		**62**
55-59		4	17	17	24	11	10	2		**85**
60-64	1	4	20	13	20	6	3	1	1	**69**
65-69		2	4	4	3	2	1			**16**
70-74		1	1	1						**3**
75+										
Total	**1**	**36**	**112**	**71**	**85**	**31**	**16**	**4**	**1**	**357**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	2	696
35-39	17	373
40-44	18	1,038
45-49	28	1,484
50-54	51	744
55-59	69	948
60-64	44	1,104
65-69	22	1,232
70-74	6	193
75+	12	340
Total	269	938

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	3	637
45-49	3	1,333
50-54	15	1,361
55-59	83	2,028
60-64	186	1,682
65-69	241	1,562
70-74	168	1,347
75-79	163	1,388
80-84	92	873
85-89	54	712
90-94	36	668
95-99	10	268
100+		
Total	1,054	1,406

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Douglas County Fire District #2/2729
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Douglas County Fire District #2/2729

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Douglas County Fire District #2 -- #2729

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Douglas County Fire District #2 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Douglas County Fire District #2.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Douglas County Fire District #2

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.20%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	6.99%	6.99%	6.99%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**23.79%**	**14.95%**	**19.05%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**24.35%**	**15.43%**	**19.53%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 67%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	18.41%	18.41%
Minimum July 1, 2015 Rate	14.73%	11.05%
Maximum July 1, 2015 Rate	22.09%	25.77%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$24,464,191	$22,957,040	($1,507,151)	107%	$3,552,653	(42%)
12/31/2008	18,740,759	24,471,290	5,730,531	77%	5,030,988	114%
12/31/2009	21,244,955	27,112,422	5,867,467	78%	5,578,286	105%
12/31/2010	21,669,482	30,397,731	8,728,249	71%	5,660,706	154%
12/31/2011	19,613,988	31,008,691	11,394,703	63%	5,860,669	194%
12/31/2012	21,018,049	31,222,770	10,204,721	67%	5,735,311	178%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Douglas County Fire District #2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$10,204,721	$11,394,703
Allocated pooled OPSRP UAL	404,241	99,997
Side account	0	0
Net unfunded pension actuarial accrued liability	10,608,962	11,494,700
Combined valuation payroll	5,735,311	5,860,669
Net pension UAL as a percentage of payroll	185%	196%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$120,329	$151,824

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$415,619	$457,460
Tier 1/Tier 2 valuation payroll	2,565,696	2,802,034
Tier 1/Tier 2 pension normal cost rate	16.20%	16.33%
Tier 1/ Tier 2 Actuarial accrued liability	$31,222,770	$31,008,691
Actuarial asset value	21,018,049	19,613,988
Tier 1/Tier 2 Unfunded actuarial accrued liability	10,204,721	11,394,703
Tier 1/ Tier 2 Funded status	67%	63%
Combined valuation payroll	$5,735,311	$5,860,669
Tier 1/Tier 2 UAL as a percentage of payroll	178%	194%
Tier 1/Tier 2 UAL rate	6.99%	6.48%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	30	32
Tier 1/Tier 2 dormant members	4	7
Tier 1/Tier 2 retirees and beneficiaries	39	37

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	5,735,311	5,860,669
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,250,178	$1,997,972
2. Employer reserves	5,956,815	5,395,098
3. Benefits in force reserve	12,811,056	12,220,918
4. Total market value of assets *(1. + 2. + 3.)*	**$21,018,049**	**$19,613,988**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$19,613,988
2.	Regular employer contributions	402,005
3.	Benefit payments and expenses	(2,012,067)
4.	Adjustments [2]	380,391
5.	Interest credited	2,633,732
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$21,018,049**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	**December 31, 2011**
Tier 1 Police & Fire	$241,201	$287,496
Tier 1 General Service	12,247	8,111
Tier 2 Police & Fire	158,290	152,740
Tier 2 General Service	3,881	9,113
Total	**$415,619**	**$457,460**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$432,502	$415,619	($16,883)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$7,116,997	$6,639,540
▪ Tier 1 General Service	214,992	197,801
▪ Tier 2 Police & Fire	1,962,093	1,406,170
▪ Tier 2 General Service	43,306	42,207
▪ **Total Active Members**	**$9,337,388**	**$8,285,718**
Dormant Members	296,983	496,349
Retired Members and Beneficiaries	21,588,399	22,226,624
Total Actuarial Accrued Liability	**$31,222,770**	**$31,008,691**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$32,553,911	$31,222,770	($1,331,141)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$31,222,770	$31,008,691
2. Actuarial value of assets	21,018,049	19,613,988
3. Unfunded accrued liability *(1. – 2.)*	10,204,721	11,394,703
4. Funded percentage *(2. ÷ 1.)*	67%	63%
5. Combined valuation payroll	$5,735,311	$5,860,669
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	178%	194%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$10,204,721	$738,616
Total				**$10,204,721**	**$738,616**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$31,008,691
b. Normal cost at December 31, 2011	457,460
c. Benefit payments during 2012	(1,996,317)
d. Interest at 8.0% to December 31, 2012	2,437,439
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	31,907,273
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,331,141)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	30,576,132
2. Actuarial accrued liability at December 31, 2012	31,222,770
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(646,638)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	19,613,988
b. Contributions for 2012[1]	402,005
c. Benefit payments and expenses during 2012	(2,012,067)
d. Interest at 8.0% to December 31, 2012	1,504,717
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	19,508,643
5. Actuarial value of assets at December 31, 2012	21,018,049
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,509,406
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$862,768**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$11,394,703**
2. Expected increase	1,003,927
3. Liability (gain)/loss	646,638
4. Asset (gain)/loss	(1,509,406)
5. Change due to changes in assumptions, methods, and plan provisions	(1,331,141)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$10,204,721**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$241,201	$1,406,955	17.14%	$287,496	$1,603,099	17.93%
Tier 1 General Service	12,247	91,455	13.39%	8,111	70,811	11.45%
Tier 2 Police & Fire	158,290	1,025,993	15.43%	152,740	1,034,503	14.76%
Tier 2 General Service	3,881	41,293	9.40%	9,113	93,621	9.73%
Total	**$415,619**	**$2,565,696**	**16.20%**	**$457,460**	**$2,802,034**	**16.33%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$10,204,721	$11,394,703
2. Next year's Tier 1/Tier 2 UAL payment	738,616	864,060
3. Combined valuation payroll	5,735,311	5,860,669
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	12.88%	14.74%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.20%	16.33%
b. Tier 1/Tier 2 UAL rate	12.88%	14.74%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	29.21%	31.20%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	18.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	18.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.68%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.68%
c. Funded percentage	67%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	4.78%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	13.63%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	23.19%
7. July 1, 2015 total pension rate, before adjustment	29.21%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(6.02%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	12.88%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	6.86%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	23.19%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.20%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.20%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	23.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.20%	16.33%
b. Tier 1/Tier 2 UAL rate	6.86%	6.35%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	23.19%	22.81%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$91,455	$1,406,955	$1,498,410
Tier 2	41,293	1,025,993	1,067,286
Tier 1/Tier 2 valuation payroll	132,748	2,432,948	2,565,696
OPSRP valuation payroll	1,671,516	1,498,099	3,169,615
Combined valuation payroll	**$1,804,264**	**$3,931,047**	**$5,735,311**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	39	42	1	2	41	44
Police & Fire	15	12	18	45	17	12	15	44
Total	17	13	57	87	18	14	56	88
Active Members with previous service segments with the employer								
General Service	1	1	N/A	2	1	2	N/A	3
Police & Fire	3	2	N/A	5	1	1	N/A	2
Total	4	3	N/A	7	2	3	N/A	5
Dormant Members								
General Service	0	1	2	3	0	2	1	3
Police & Fire	2	1	0	3	2	3	0	5
Total	2	2	2	6	2	5	1	8
Retired Members and Beneficiaries								
General Service	1	1	0	2	1	0	0	1
Police & Fire	36	1	0	37	35	1	0	36
Total	37	2	0	39	36	1	0	37
Grand Total Number of Members	**60**	**20**	**59**	**139**	**58**	**23**	**57**	**138**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		1	1							**2**
35-39			4							**4**
40-44			1	2	1					**4**
45-49			4	5	2	2				**13**
50-54				1	4					**5**
55-59		1		1						**2**
60-64										
65-69										
70-74										
75+										
Total	**0**	**2**	**10**	**9**	**7**	**2**	**0**	**0**	**0**	**30**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	1,933
40-44	1	225
45-49	1	3,082
50-54		
55-59		
60-64		
65-69	1	69
70-74		
75+		
Total	4	1,327

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	6	4,343
55-59	8	4,924
60-64	9	4,282
65-69	7	2,909
70-74	4	2,319
75-79	5	2,141
80-84		
85-89		
90-94		
95-99		
100+		
Total	39	3,701

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Deschutes Valley Water District/2527
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Deschutes Valley Water District/2527

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Deschutes Valley Water District -- #2527

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Deschutes Valley Water District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Deschutes Valley Water District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Deschutes Valley Water District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.79%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.44%	4.44%	4.44%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.83%**	**12.40%**	**16.50%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**19.39%**	**12.88%**	**16.98%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 83%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	15.19%	15.19%
Minimum July 1, 2015 Rate	12.15%	9.11%
Maximum July 1, 2015 Rate	18.23%	21.27%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$7,180,320	$8,057,506	$877,186	89%	$1,611,789	54%
12/31/2008	5,798,667	8,368,502	2,569,835	69%	1,761,304	146%
12/31/2009	6,744,874	9,050,801	2,305,927	75%	1,719,655	134%
12/31/2010	7,454,286	9,509,643	2,055,357	78%	1,701,768	121%
12/31/2011	7,556,537	10,044,617	2,488,080	75%	1,753,293	142%
12/31/2012	8,072,355	9,748,713	1,676,358	83%	1,729,841	97%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Deschutes Valley Water District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,676,358	$2,488,080
Allocated pooled OPSRP UAL	121,924	29,915
Side account	0	0
Net unfunded pension actuarial accrued liability	1,798,282	2,517,995
Combined valuation payroll	1,729,841	1,753,293
Net pension UAL as a percentage of payroll	104%	144%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$36,293	$45,420

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$184,107	$85,437
Tier 1/Tier 2 valuation payroll	1,335,280	1,373,790
Tier 1/Tier 2 pension normal cost rate	13.79%	6.22%
Tier 1/ Tier 2 Actuarial accrued liability	$9,748,713	$10,044,617
Actuarial asset value	8,072,355	7,556,537
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,676,358	2,488,080
Tier 1/ Tier 2 Funded status	83%	75%
Combined valuation payroll	$1,729,841	$1,753,293
Tier 1/Tier 2 UAL as a percentage of payroll	97%	142%
Tier 1/Tier 2 UAL rate	4.44%	11.47%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	17	18
Tier 1/Tier 2 dormant members	2	3
Tier 1/Tier 2 retirees and beneficiaries	12	10

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	1,729,841	1,753,293
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,984,753	$2,199,554
2. Employer reserves	3,391,678	3,265,794
3. Benefits in force reserve	2,695,924	2,091,189
4. Total market value of assets ***(1. + 2. + 3.)***	**$8,072,355**	**$7,556,537**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$7,556,537
2. Regular employer contributions	242,132
3. Benefit payments and expenses	(423,414)
4. Adjustments [2]	(251,065)
5. Interest credited	948,164
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$8,072,355**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	144,246	46,486
Tier 2 Police & Fire	0	0
Tier 2 General Service	39,861	38,951
Total	**$184,107**	**$85,437**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$98,239	$184,107	$85,868

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	4,492,649	5,153,102
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	684,291	469,797
▪ **Total Active Members**	**$5,176,940**	**$5,622,899**
Dormant Members	28,769	618,396
Retired Members and Beneficiaries	4,543,004	3,803,322
Total Actuarial Accrued Liability	**$9,748,713**	**$10,044,617**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$10,357,347	$9,748,713	($608,634)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$9,748,713	$10,044,617
2. Actuarial value of assets	8,072,355	7,556,537
3. Unfunded accrued liability *(1. – 2.)*	1,676,358	2,488,080
4. Funded percentage *(2. ÷ 1.)*	83%	75%
5. Combined valuation payroll	$1,729,841	$1,753,293
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	97%	142%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,676,358	$121,335
Total				**$1,676,358**	**$121,335**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$10,044,617
b. Normal cost at December 31, 2011	85,437
c. Benefit payments during 2012	(420,100)
d. Interest at 8.0% to December 31, 2012	793,600
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	10,503,554
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(608,634)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	9,894,920
2. Actuarial accrued liability at December 31, 2012	9,748,713
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	146,207
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	7,556,537
b. Contributions for 2012[1]	242,132
c. Benefit payments and expenses during 2012	(423,414)
d. Interest at 8.0% to December 31, 2012	597,272
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	7,972,527
5. Actuarial value of assets at December 31, 2012	8,072,355
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	99,828
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$246,035**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$2,488,080**
2. Expected increase	42,947
3. Liability (gain)/loss	(146,207)
4. Asset (gain)/loss	(99,828)
5. Change due to changes in assumptions, methods, and plan provisions	(608,634)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,676,358**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	144,246	911,162	15.83%	46,486	958,526	4.85%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	39,861	424,118	9.40%	38,951	415,264	9.38%
Total	**$184,107**	**$1,335,280**	**13.79%**	**$85,437**	**$1,373,790**	**6.22%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,676,358	$2,488,080
2. Next year's Tier 1/Tier 2 UAL payment	121,335	198,889
3. Combined valuation payroll	1,729,841	1,753,293
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	7.01%	11.34%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.79%	6.22%
b. Tier 1/Tier 2 UAL rate	7.01%	11.34%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.93%	17.69%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	15.19%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.19%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.04%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.04%
c. Funded percentage	83%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.04%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.15%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	18.23%
7. July 1, 2015 total pension rate, before adjustment	20.93%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.70%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	7.01%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.31%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	18.23%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.79%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.79%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	18.23%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.79%	6.22%
b. Tier 1/Tier 2 UAL rate	4.31%	11.34%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	18.23%	17.69%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$911,162	$0	$911,162
Tier 2	424,118	0	424,118
Tier 1/Tier 2 valuation payroll	1,335,280	0	1,335,280
OPSRP valuation payroll	394,561	0	394,561
Combined valuation payroll	**$1,729,841**	**$0**	**$1,729,841**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	11	6	6	23	12	6	6	24
Police & Fire	0	0	0	0	0	0	0	0
Total	11	6	6	23	12	6	6	24
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	1	1	0	2	2	1	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	0	2	2	1	0	3
Retired Members and Beneficiaries								
General Service	12	0	0	12	10	0	0	10
Police & Fire	0	0	0	0	0	0	0	0
Total	12	0	0	12	10	0	0	10
Grand Total Number of Members	**24**	**7**	**6**	**37**	**24**	**7**	**6**	**37**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39		1	1	1						**3**
40-44			1	3						**4**
45-49		1	1			1				**3**
50-54						1	1			**2**
55-59				1		2	1			**4**
60-64								1		**1**
65-69										
70-74										
75+										
Total	**0**	**2**	**3**	**5**	**0**	**4**	**2**	**1**	**0**	**17**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	54
60-64	1	153
65-69		
70-74		
75+		
Total	2	104

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	2,998
60-64	3	2,442
65-69	4	2,442
70-74	2	2,550
75-79	1	2,503
80-84		
85-89		
90-94		
95-99		
100+		
Total	12	2,558

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Deschutes Public Library District/2828
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Deschutes Public Library District/2828

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
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This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Deschutes Public Library District -- #2828

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Deschutes Public Library District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Deschutes Public Library District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Deschutes Public Library District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.36%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.52%	0.52%	0.52%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.48%**	**8.48%**	**12.58%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**13.04%**	**8.96%**	**13.06%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 80%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.88%	8.88%
Minimum July 1, 2015 Rate	5.88%	2.88%
Maximum July 1, 2015 Rate	11.88%	14.88%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$4,160,466	$3,022,986	($1,137,480)	138%	$3,560,695	(32%)
12/31/2008	3,161,153	3,612,587	451,434	88%	3,390,752	13%
12/31/2009	3,825,441	4,265,062	439,621	90%	3,541,986	12%
12/31/2010	4,331,306	4,802,931	471,625	90%	3,845,887	12%
12/31/2011	4,460,613	5,277,704	817,091	85%	3,653,084	22%
12/31/2012	5,162,441	6,430,787	1,268,346	80%	3,859,982	33%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Deschutes Public Library District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,268,346	$817,091
Allocated pooled OPSRP UAL	272,062	62,330
Side account	0	0
Net unfunded pension actuarial accrued liability	1,540,408	879,421
Combined valuation payroll	3,859,982	3,653,084
Net pension UAL as a percentage of payroll	40%	24%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$80,984	$94,635

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$276,887	$236,232
Tier 1/Tier 2 valuation payroll	2,438,388	2,417,332
Tier 1/Tier 2 pension normal cost rate	11.36%	9.77%
Tier 1/ Tier 2 Actuarial accrued liability	$6,430,787	$5,277,704
Actuarial asset value	5,162,441	4,460,613
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,268,346	817,091
Tier 1/ Tier 2 Funded status	80%	85%
Combined valuation payroll	$3,859,982	$3,653,084
Tier 1/Tier 2 UAL as a percentage of payroll	33%	22%
Tier 1/Tier 2 UAL rate	0.52%	1.61%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	51	53
Tier 1/Tier 2 dormant members	20	24
Tier 1/Tier 2 retirees and beneficiaries	17	15

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	3,859,982	3,653,084
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$727,947	$668,361
2. Employer reserves	3,578,137	3,172,436
3. Benefits in force reserve	856,357	619,816
4. Total market value of assets ***(1. + 2. + 3.)***	**$5,162,441**	**$4,460,613**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$4,460,613
2. Regular employer contributions	230,595
3. Benefit payments and expenses	(134,497)
4. Adjustments [2]	(48,920)
5. Interest credited	654,650
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$5,162,441**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	79,809	44,070
Tier 2 Police & Fire	0	0
Tier 2 General Service	197,078	192,162
Total	**$276,887**	**$236,232**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$244,211	$276,887	$32,676

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	1,188,807	1,160,987
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	3,417,009	2,483,407
▪ **Total Active Members**	**$4,605,816**	**$3,644,394**
Dormant Members	381,891	506,028
Retired Members and Beneficiaries	1,443,080	1,127,282
Total Actuarial Accrued Liability	**$6,430,787**	**$5,277,704**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$6,012,033	$6,430,787	$418,754

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$6,430,787	$5,277,704
2. Actuarial value of assets	5,162,441	4,460,613
3. Unfunded accrued liability *(1. – 2.)*	1,268,346	817,091
4. Funded percentage *(2. ÷ 1.)*	80%	85%
5. Combined valuation payroll	$3,859,982	$3,653,084
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	33%	22%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,268,346	$91,803
Total				**$1,268,346**	**$91,803**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$5,277,704
b. Normal cost at December 31, 2011	236,232
c. Benefit payments during 2012	(133,444)
d. Interest at 8.0% to December 31, 2012	435,777
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	5,816,269
f. Change in actuarial accrued liability due to assumption, method, and plan changes	418,754
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	6,235,023
2. Actuarial accrued liability at December 31, 2012	6,430,787
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(195,764)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	4,460,613
b. Contributions for 2012[1]	230,595
c. Benefit payments and expenses during 2012	(134,497)
d. Interest at 8.0% to December 31, 2012	360,693
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	4,917,404
5. Actuarial value of assets at December 31, 2012	5,162,441
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	245,037
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$49,273**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$817,091**
2. Expected increase	81,774
3. Liability (gain)/loss	195,764
4. Asset (gain)/loss	(245,037)
5. Change due to changes in assumptions, methods, and plan provisions	418,754
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,268,346**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	79,809	565,194	14.12%	44,070	624,868	7.05%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	197,078	1,873,194	10.52%	192,162	1,792,464	10.72%
Total	**$276,887**	**$2,438,388**	**11.36%**	**$236,232**	**$2,417,332**	**9.77%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,268,346	$817,091
2. Next year's Tier 1/Tier 2 UAL payment	91,803	53,925
3. Combined valuation payroll	3,859,982	3,653,084
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.38%	1.48%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.36%	9.77%
b. Tier 1/Tier 2 UAL rate	2.38%	1.48%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.87%	11.38%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.88%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.88%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.78%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	80%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.88%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.88%
7. July 1, 2015 total pension rate, before adjustment	13.87%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.99%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.38%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.39%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.88%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.36%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.36%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.88%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.36%	9.77%
b. Tier 1/Tier 2 UAL rate	0.39%	1.48%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.88%	11.38%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$565,194	$0	$565,194
Tier 2	1,873,194	0	1,873,194
Tier 1/Tier 2 valuation payroll	2,438,388	0	2,438,388
OPSRP valuation payroll	1,421,594	0	1,421,594
Combined valuation payroll	**$3,859,982**	**$0**	**$3,859,982**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	14	37	44	95	15	38	40	93
Police & Fire	0	0	0	0	0	0	0	0
Total	14	37	44	95	15	38	40	93
Active Members with previous service segments with the employer								
General Service	2	2	N/A	4	3	5	N/A	8
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	2	2	N/A	4	3	5	N/A	8
Dormant Members								
General Service	5	15	4	24	6	18	3	27
Police & Fire	0	0	0	0	0	0	0	0
Total	5	15	4	24	6	18	3	27
Retired Members and Beneficiaries								
General Service	13	4	1	18	12	3	1	16
Police & Fire	0	0	0	0	0	0	0	0
Total	13	4	1	18	12	3	1	16
Grand Total Number of Members	**34**	**58**	**49**	**141**	**36**	**64**	**44**	**144**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			2							2
40-44		2	4	1						7
45-49		1	6	2						9
50-54		1	9	1	1					12
55-59		1	5			1				7
60-64		1	3	1	2					7
65-69			2			2				4
70-74			2				1			3
75+										
Total	**0**	**6**	**33**	**5**	**3**	**3**	**1**	**0**	**0**	**51**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	572
35-39	2	452
40-44	2	38
45-49	2	590
50-54	2	479
55-59	5	238
60-64	4	232
65-69	1	92
70-74		
75+	1	110
Total	20	300

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	1,466
60-64	7	594
65-69	3	356
70-74	5	647
75-79	1	315
80-84		
85-89		
90-94		
95-99		
100+		
Total	17	602

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Curry County/2002
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Curry County/2002

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Curry County/2002

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Curry County -- #2002

Secondary Employers

2034 Curry County General Hospital

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Curry County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Curry County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Curry County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.37%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.32%)	(0.32%)	(0.32%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.65%**	**7.64%**	**11.74%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.21%**	**8.12%**	**12.22%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 90%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.05%	14.05%
Minimum July 1, 2015 Rate	11.05%	8.05%
Maximum July 1, 2015 Rate	17.05%	20.05%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$49,435,034	$47,921,529	($1,513,505)	103%	$7,152,159	(21%)
12/31/2008	37,521,676	48,686,859	11,165,183	77%	7,358,990	152%
12/31/2009	42,368,434	51,342,325	8,973,891	83%	8,625,316	104%
12/31/2010	44,773,178	52,653,513	7,880,335	85%	8,242,417	96%
12/31/2011	43,857,781	53,518,685	9,660,904	82%	6,452,202	150%
12/31/2012	47,011,256	51,970,582	4,959,326	90%	5,808,820	85%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Curry County

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$4,959,326	$9,660,904
Allocated pooled OPSRP UAL	409,422	110,090
Side account	0	0
Net unfunded pension actuarial accrued liability	5,368,748	9,770,994
Combined valuation payroll	5,808,820	6,452,202
Net pension UAL as a percentage of payroll	92%	151%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$121,872	$167,148

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$539,024	$336,014
Tier 1/Tier 2 valuation payroll	3,102,426	3,614,799
Tier 1/Tier 2 pension normal cost rate	17.37%	9.30%
Tier 1/ Tier 2 Actuarial accrued liability	$51,970,582	$53,518,685
Actuarial asset value	47,011,256	43,857,781
Tier 1/Tier 2 Unfunded actuarial accrued liability	4,959,326	9,660,904
Tier 1/ Tier 2 Funded status	90%	82%
Combined valuation payroll	$5,808,820	$6,452,202
Tier 1/Tier 2 UAL as a percentage of payroll	85%	150%
Tier 1/Tier 2 UAL rate	(0.32%)	7.75%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	60	71
Tier 1/Tier 2 dormant members	98	103
Tier 1/Tier 2 retirees and beneficiaries	267	249

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	5,808,820	6,452,202
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$9,499,057	$9,895,293
2. Employer reserves	21,332,524	20,276,826
3. Benefits in force reserve	16,179,675	13,685,662
4. Total market value of assets ***(1. + 2. + 3.)***	**$47,011,256**	**$43,857,781**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$43,857,781
2. Regular employer contributions	615,957
3. Benefit payments and expenses	(2,541,133)
4. Adjustments[2]	(553,896)
5. Interest credited	5,632,546
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$47,011,256**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$107,869	$96,442
Tier 1 General Service	242,969	42,324
Tier 2 Police & Fire	82,164	83,761
Tier 2 General Service	106,022	113,487
Total	**$539,024**	**$336,014**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$296,228	$539,024	$242,796

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$3,441,586	$3,903,769
▪ Tier 1 General Service	10,193,904	13,856,461
▪ Tier 2 Police & Fire	1,479,818	1,285,695
▪ Tier 2 General Service	2,133,436	1,814,184
▪ **Total Active Members**	**$17,248,744**	**$20,860,109**
Dormant Members	7,456,853	7,767,968
Retired Members and Beneficiaries	27,264,985	24,890,608
Total Actuarial Accrued Liability	**$51,970,582**	**$53,518,685**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$55,360,201	$51,970,582	($3,389,619)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$51,970,582	$53,518,685
2. Actuarial value of assets	47,011,256	43,857,781
3. Unfunded accrued liability *(1. – 2.)*	4,959,326	9,660,904
4. Funded percentage *(2. ÷ 1.)*	90%	82%
5. Combined valuation payroll	$5,808,820	$6,452,202
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	85%	150%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$4,959,326	$358,955
Total				**$4,959,326**	**$358,955**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$53,518,685
b. Normal cost at December 31, 2011	336,014
c. Benefit payments during 2012	(2,521,241)
d. Interest at 8.0% to December 31, 2012	4,207,526
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	55,540,984
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(3,389,619)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	52,151,365
2. Actuarial accrued liability at December 31, 2012	51,970,582
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	180,783
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	43,857,781
b. Contributions for 2012[1]	615,957
c. Benefit payments and expenses during 2012	(2,541,133)
d. Interest at 8.0% to December 31, 2012	3,431,615
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	45,364,221
5. Actuarial value of assets at December 31, 2012	47,011,256
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,647,034
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$1,827,817**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$9,660,904**
2. Expected increase	515,858
3. Liability (gain)/loss	(180,783)
4. Asset (gain)/loss	(1,647,034)
5. Change due to changes in assumptions, methods, and plan provisions	(3,389,619)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$4,959,326**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$107,869	$591,062	18.25%	$96,442	$626,516	15.39%
Tier 1 General Service	242,969	1,128,618	21.53%	42,324	1,533,949	2.76%
Tier 2 Police & Fire	82,164	464,656	17.68%	83,761	516,585	16.21%
Tier 2 General Service	106,022	918,090	11.55%	113,487	937,749	12.10%
Total	**$539,024**	**$3,102,426**	**17.37%**	**$336,014**	**$3,614,799**	**9.30%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$4,959,326	$9,660,904
2. Next year's Tier 1/Tier 2 UAL payment	358,955	743,459
3. Combined valuation payroll	5,808,820	6,452,202
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.18%	11.52%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.37%	9.30%
b. Tier 1/Tier 2 UAL rate	6.18%	11.52%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	23.68%	20.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.05%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.05%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.81%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	90%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.05%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.05%
7. July 1, 2015 total pension rate, before adjustment	23.68%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(6.63%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.18%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.45%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.05%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.37%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.37%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.05%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.37%	9.30%
b. Tier 1/Tier 2 UAL rate	(0.45%)	7.62%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.05%	17.05%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,128,618	$591,062	$1,719,680
Tier 2	918,090	464,656	1,382,746
Tier 1/Tier 2 valuation payroll	2,046,708	1,055,718	3,102,426
OPSRP valuation payroll	2,218,560	487,834	2,706,394
Combined valuation payroll	**$4,265,268**	**$1,543,552**	**$5,808,820**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	21	21	52	94	29	21	59	109
Police & Fire	10	8	11	29	12	9	15	36
Total	31	29	63	123	41	30	74	145
Active Members with previous service segments with the employer								
General Service	28	13	N/A	41	35	16	N/A	51
Police & Fire	9	8	N/A	17	13	11	N/A	24
Total	37	21	N/A	58	48	27	N/A	75
Dormant Members								
General Service	38	50	22	110	38	53	21	112
Police & Fire	7	3	4	14	8	4	2	14
Total	45	53	26	124	46	57	23	126
Retired Members and Beneficiaries								
General Service	200	17	1	218	190	14	0	204
Police & Fire	47	3	0	50	43	2	0	45
Total	247	20	1	268	233	16	0	249
Grand Total Number of Members	**360**	**123**	**90**	**573**	**368**	**130**	**97**	**595**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39		1	1							**2**
40-44			4	3						**7**
45-49		1	4	1	3	1				**10**
50-54	1	1	2	1	2	1	1			**9**
55-59	1	1	5	1	6	4	2	1		**21**
60-64			3	1	1	2		1		**8**
65-69		1	1		1					**3**
70-74										
75+										
Total	**2**	**5**	**20**	**7**	**13**	**8**	**3**	**2**	**0**	**60**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	74
35-39	2	93
40-44	6	1,082
45-49	4	774
50-54	16	775
55-59	26	821
60-64	28	662
65-69	12	758
70-74	2	186
75+	1	2,386
Total	98	755

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	6	506
55-59	12	1,657
60-64	38	947
65-69	61	925
70-74	48	920
75-79	44	618
80-84	26	510
85-89	17	435
90-94	12	336
95-99	3	167
100+		
Total	267	794

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Columbia River Public Utility District/2679
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Columbia River Public Utility District/2679

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Columbia River Public Utility District/2679

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA	Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary	Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Columbia River Public Utility District -- #2679

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Columbia River Public Utility District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Columbia River Public Utility District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Columbia River Public Utility District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.59%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.05%)	(0.05%)	(0.05%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.14%**	**7.91%**	**12.01%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**13.70%**	**8.39%**	**12.49%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 90%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	9.54%	9.54%
Minimum July 1, 2015 Rate	6.54%	3.54%
Maximum July 1, 2015 Rate	12.54%	15.54%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$11,946,047	$11,559,613	($386,434)	103%	$3,346,090	(12%)
12/31/2008	9,237,840	11,926,365	2,688,525	77%	3,627,190	74%
12/31/2009	10,976,475	12,944,562	1,968,087	85%	3,947,347	50%
12/31/2010	12,073,472	14,110,150	2,036,678	86%	3,977,426	51%
12/31/2011	11,614,143	13,958,378	2,344,235	83%	4,487,797	52%
12/31/2012	12,840,692	14,267,091	1,426,399	90%	4,454,644	32%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Columbia River Public Utility District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,426,399	$2,344,235
Allocated pooled OPSRP UAL	313,976	76,572
Side account	0	0
Net unfunded pension actuarial accrued liability	1,740,375	2,420,807
Combined valuation payroll	4,454,644	4,487,797
Net pension UAL as a percentage of payroll	39%	54%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$93,460	$116,259

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$313,190	$220,580
Tier 1/Tier 2 valuation payroll	2,486,798	2,772,392
Tier 1/Tier 2 pension normal cost rate	12.59%	7.96%
Tier 1/ Tier 2 Actuarial accrued liability	$14,267,091	$13,958,378
Actuarial asset value	12,840,692	11,614,143
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,426,399	2,344,235
Tier 1/ Tier 2 Funded status	90%	83%
Combined valuation payroll	$4,454,644	$4,487,797
Tier 1/Tier 2 UAL as a percentage of payroll	32%	52%
Tier 1/Tier 2 UAL rate	(0.05%)	4.08%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	26	29
Tier 1/Tier 2 dormant members	14	14
Tier 1/Tier 2 retirees and beneficiaries	16	13

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	4,454,644	4,487,797
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,918,117	$3,131,146
2. Employer reserves	6,760,848	6,303,651
3. Benefits in force reserve	3,161,727	2,179,345
4. Total market value of assets ***(1. + 2. + 3.)***	**$12,840,692**	**$11,614,143**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$11,614,143
2.	Regular employer contributions	329,759
3.	Benefit payments and expenses	(496,572)
4.	Adjustments [2]	(162,300)
5.	Interest credited	1,555,661
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$12,840,692**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	**December 31, 2011**
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	202,747	100,013
Tier 2 Police & Fire	0	0
Tier 2 General Service	110,443	120,567
Total	**$313,190**	**$220,580**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$220,370	$313,190	$92,820

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	5,107,525	5,872,946
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	1,943,161	1,545,365
▪ **Total Active Members**	**$7,050,686**	**$7,418,311**
Dormant Members	1,888,459	2,576,412
Retired Members and Beneficiaries	5,327,946	3,963,655
Total Actuarial Accrued Liability	**$14,267,091**	**$13,958,378**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$14,925,203	$14,267,091	($658,112)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$14,267,091	$13,958,378
2. Actuarial value of assets	12,840,692	11,614,143
3. Unfunded accrued liability *(1. – 2.)*	1,426,399	2,344,235
4. Funded percentage *(2. ÷ 1.)*	90%	83%
5. Combined valuation payroll	$4,454,644	$4,487,797
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	32%	52%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,426,399	$103,243
Total				**$1,426,399**	**$103,243**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$13,958,378
b. Normal cost at December 31, 2011	220,580
c. Benefit payments during 2012	(492,684)
d. Interest at 8.0% to December 31, 2012	1,114,609
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	14,800,883
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(658,112)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	14,142,771
2. Actuarial accrued liability at December 31, 2012	14,267,091
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(124,320)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	11,614,143
b. Contributions for 2012[1]	329,759
c. Benefit payments and expenses during 2012	(496,572)
d. Interest at 8.0% to December 31, 2012	922,459
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	12,369,789
5. Actuarial value of assets at December 31, 2012	12,840,692
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	470,902
7. Total actuarial gain/(loss) *(3. + 6.)*	**$346,582**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$2,344,235**
2. Expected increase	86,858
3. Liability (gain)/loss	124,320
4. Asset (gain)/loss	(470,902)
5. Change due to changes in assumptions, methods, and plan provisions	(658,112)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$1,426,399**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	202,747	1,434,461	14.13%	100,013	1,567,700	6.38%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	110,443	1,052,337	10.50%	120,567	1,204,692	10.01%
Total	**$313,190**	**$2,486,798**	**12.59%**	**$220,580**	**$2,772,392**	**7.96%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,426,399	$2,344,235
2. Next year's Tier 1/Tier 2 UAL payment	103,243	177,054
3. Combined valuation payroll	4,454,644	4,487,797
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.32%	3.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.59%	7.96%
b. Tier 1/Tier 2 UAL rate	2.32%	3.95%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.04%	12.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.54%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.54%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.91%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	90%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.54%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	12.54%
7. July 1, 2015 total pension rate, before adjustment	15.04%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.50%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.32%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.18%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.54%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.59%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.59%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.54%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.59%	7.96%
b. Tier 1/Tier 2 UAL rate	(0.18%)	3.95%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.54%	12.04%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,434,461	$0	$1,434,461
Tier 2	1,052,337	0	1,052,337
Tier 1/Tier 2 valuation payroll	2,486,798	0	2,486,798
OPSRP valuation payroll	1,967,846	0	1,967,846
Combined valuation payroll	**$4,454,644**	**$0**	**$4,454,644**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	14	12	24	50	16	13	22	51
Police & Fire	0	0	0	0	0	0	0	0
Total	14	12	24	50	16	13	22	51
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	4	N/A	4
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	4	N/A	4
Dormant Members								
General Service	7	7	0	14	8	6	0	14
Police & Fire	0	0	0	0	0	0	0	0
Total	7	7	0	14	8	6	0	14
Retired Members and Beneficiaries								
General Service	15	1	0	16	12	1	0	13
Police & Fire	0	0	0	0	0	0	0	0
Total	15	1	0	16	12	1	0	13
Grand Total Number of Members	**36**	**20**	**24**	**80**	**36**	**24**	**22**	**82**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44			5	1		1				**7**
45-49			4							**4**
50-54				1	1					**2**
55-59		2	1	2	2	5				**12**
60-64						1				**1**
65-69										
70-74										
75+										
Total	**0**	**2**	**10**	**4**	**3**	**7**	**0**	**0**	**0**	**26**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	2	928
40-44	3	1,076
45-49	4	2,152
50-54	3	2,019
55-59	2	2,034
60-64		
65-69		
70-74		
75+		
Total	14	1,701

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	3,033
55-59	1	1,347
60-64	4	3,155
65-69	6	2,562
70-74	2	1,221
75-79	1	259
80-84	1	404
85-89		
90-94		
95-99		
100+		
Total	16	2,217

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Clackamas River Water Providers/2870
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Clackamas River Water Providers/2870

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Clackamas River Water Providers/2870

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Clackamas River Water Providers -- #2870

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Clackamas River Water Providers to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Clackamas River Water Providers.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Clackamas River Water Providers

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	7.01%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.51%	0.51%	0.51%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**8.12%**	**8.47%**	**12.57%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**8.68%**	**8.95%**	**13.05%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 58%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

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Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$0	0%
12/31/2008	0	0	0	0%	0	0%
12/31/2009	0	0	0	0%	0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	5,724	6,294	570	91%	137,485	0%
12/31/2012	10,532	18,085	7,553	58%	144,904	5%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

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Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Clackamas River Water Providers

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$7,553	$570
Allocated pooled OPSRP UAL	10,213	2,346
Side account	0	0
Net unfunded pension actuarial accrued liability	17,766	2,916
Combined valuation payroll	144,904	137,485
Net pension UAL as a percentage of payroll	12%	2%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,040	$3,562

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$5,449	$5,778
Tier 1/Tier 2 valuation payroll	77,715	75,955
Tier 1/Tier 2 pension normal cost rate	7.01%	7.61%
Tier 1/ Tier 2 Actuarial accrued liability	$18,085	$6,294
Actuarial asset value	10,532	5,724
Tier 1/Tier 2 Unfunded actuarial accrued liability	7,553	570
Tier 1/ Tier 2 Funded status	58%	91%
Combined valuation payroll	$144,904	$137,485
Tier 1/Tier 2 UAL as a percentage of payroll	5%	0%
Tier 1/Tier 2 UAL rate	0.51%	0.16%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	144,904	137,485
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	10,532	5,724
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$10,532**	**$5,724**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$5,724
2.	Regular employer contributions	3,619
3.	Benefit payments and expenses	0
4.	Adjustments[2]	(161)
5.	Interest credited	1,351
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$10,532**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	5,449	5,778
Total	**$5,449**	**$5,778**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$6,192	$5,449	($743)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	18,085	6,294
▪ **Total Active Members**	**$18,085**	**$6,294**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$18,085**	**$6,294**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$10,447	$18,085	$7,638

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$18,085	$6,294
2. Actuarial value of assets	10,532	5,724
3. Unfunded accrued liability *(1. – 2.)*	7,553	570
4. Funded percentage *(2. ÷ 1.)*	58%	91%
5. Combined valuation payroll	$144,904	$137,485
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	5%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$7,553	$547
Total				**$7,553**	**$547**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$6,294
b. Normal cost at December 31, 2011	5,778
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	966
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	13,038
f. Change in actuarial accrued liability due to assumption, method, and plan changes	7,638
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	20,676
2. Actuarial accrued liability at December 31, 2012	18,085
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	2,591
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	5,724
b. Contributions for 2012[1]	3,619
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	603
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	9,946
5. Actuarial value of assets at December 31, 2012	10,532
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	587
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$3,178**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$570**
2. Expected increase	2,523
3. Liability (gain)/loss	(2,591)
4. Asset (gain)/loss	(587)
5. Change due to changes in assumptions, methods, and plan provisions	7,638
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$7,553**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	5,449	77,715	7.01%	5,778	75,955	7.61%
Total	**$5,449**	**$77,715**	**7.01%**	**$5,778**	**$75,955**	**7.61%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$7,553	$570
2. Next year's Tier 1/Tier 2 UAL payment	547	42
3. Combined valuation payroll	144,904	137,485
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.38%	0.03%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	7.01%	7.61%
b. Tier 1/Tier 2 UAL rate	0.38%	0.03%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	7.52%	7.77%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	58%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	7.52%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.38%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.38%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	7.52%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	7.01%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	7.01%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	7.52%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	7.01%	7.61%
b. Tier 1/Tier 2 UAL rate	0.38%	0.03%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	7.52%	7.77%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	77,715	0	77,715
Tier 1/Tier 2 valuation payroll	77,715	0	77,715
OPSRP valuation payroll	67,189	0	67,189
Combined valuation payroll	**$144,904**	**$0**	**$144,904**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	1	2	0	1	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	1	1	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**1**	**1**	**2**	**0**	**1**	**1**	**2**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							1
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	1	0	0	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Clackamas County/2001
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Clackamas County/2001

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Clackamas County/2001

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Clackamas County -- #2001

Secondary Employers

2045	Clackamas County Service District #1
2791	Clackamas County Fair

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Clackamas County to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Clackamas County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Clackamas County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.20%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	3.55%	3.55%	3.55%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.35%**	**11.51%**	**15.61%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.91%**	**11.99%**	**16.09%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 86%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.75%	14.75%
Minimum July 1, 2015 Rate	11.75%	8.75%
Maximum July 1, 2015 Rate	17.75%	20.75%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$601,533,690	$591,352,945	($10,180,745)	102%	$102,505,876	(10%)
12/31/2008	452,197,009	606,617,813	154,420,804	75%	109,890,242	141%
12/31/2009	513,839,640	635,968,542	122,128,902	81%	113,373,891	108%
12/31/2010	548,929,719	669,985,910	121,056,191	82%	119,256,210	102%
12/31/2011	538,168,129	693,798,252	155,630,123	78%	119,485,687	130%
12/31/2012	590,126,155	690,218,356	100,092,201	86%	123,609,884	81%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Clackamas County

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	$100,092,201	$155,630,123
Allocated pooled OPSRP UAL	8,712,365	2,038,709
Side account	0	0
Net unfunded pension actuarial accrued liability	108,804,566	157,668,832
Combined valuation payroll	123,609,884	119,485,687
Net pension UAL as a percentage of payroll	88%	132%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,593,388	$3,095,337

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$10,675,197	$7,934,524
Tier 1/Tier 2 valuation payroll	75,170,700	77,123,747
Tier 1/Tier 2 pension normal cost rate	14.20%	10.29%
Tier 1/ Tier 2 Actuarial accrued liability	$690,218,356	$693,798,252
Actuarial asset value	590,126,155	538,168,129
Tier 1/Tier 2 Unfunded actuarial accrued liability	100,092,201	155,630,123
Tier 1/ Tier 2 Funded status	86%	78%
Combined valuation payroll	$123,609,884	$119,485,687
Tier 1/Tier 2 UAL as a percentage of payroll	81%	130%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	3.55%	8.06%
Tier 1/Tier 2 active members [1]	1,028	1,095
Tier 1/Tier 2 dormant members	596	591
Tier 1/Tier 2 retirees and beneficiaries	1,681	1,543

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	**Continuing**	**Total**
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	123,609,884	119,485,687
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$92,398,973	$89,336,869
2. Employer reserves	258,304,332	226,063,843
3. Benefits in force reserve	239,422,850	222,767,417
4. Total market value of assets ***(1. + 2. + 3.)***	**$590,126,155**	**$538,168,129**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$538,168,129
2. Regular employer contributions	13,665,418
3. Benefit payments and expenses	(37,603,056)
4. Adjustments [2]	4,358,437
5. Interest credited	71,537,228
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$590,126,155**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$2,186,091	$2,082,475
Tier 1 General Service	4,228,696	1,720,891
Tier 2 Police & Fire	1,473,554	1,365,520
Tier 2 General Service	2,786,856	2,765,638
Total	**$10,675,197**	**$7,934,524**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$8,181,924	$10,675,197	$2,493,273

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$56,774,890	$56,775,033
▪ Tier 1 General Service	117,090,506	134,962,087
▪ Tier 2 Police & Fire	20,900,208	15,209,361
▪ Tier 2 General Service	48,348,812	37,277,103
▪ **Total Active Members**	**$243,114,416**	**$244,223,584**
Dormant Members	43,643,376	44,419,518
Retired Members and Beneficiaries	403,460,564	405,155,150
Total Actuarial Accrued Liability	**$690,218,356**	**$693,798,252**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$722,015,447	$690,218,356	($31,797,091)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$690,218,356	$693,798,252
2. Actuarial value of assets	590,126,155	538,168,129
3. Unfunded accrued liability *(1. – 2.)*	100,092,201	155,630,123
4. Funded percentage *(2. ÷ 1.)*	86%	78%
5. Combined valuation payroll	$123,609,884	$119,485,687
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	81%	130%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$100,092,201	$7,244,658
Total				**$100,092,201**	**$7,244,658**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$693,798,252
b. Normal cost at December 31, 2011	7,934,524
c. Benefit payments during 2012	(37,308,703)
d. Interest at 8.0% to December 31, 2012	54,646,274
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	719,070,347
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(31,797,091)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	687,273,256
2. Actuarial accrued liability at December 31, 2012	690,218,356
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(2,945,100)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	538,168,129
b. Contributions for 2012[1]	13,665,418
c. Benefit payments and expenses during 2012	(37,603,056)
d. Interest at 8.0% to December 31, 2012	42,095,945
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	556,326,435
5. Actuarial value of assets at December 31, 2012	590,126,155
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	33,799,720
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$30,854,620**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$155,630,123**
2. Expected increase	7,113,789
3. Liability (gain)/loss	2,945,100
4. Asset (gain)/loss	(33,799,720)
5. Change due to changes in assumptions, methods, and plan provisions	(31,797,091)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$100,092,201**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$2,186,091	$12,365,701	17.68%	$2,082,475	$12,890,507	16.16%
Tier 1 General Service	4,228,696	27,430,469	15.42%	1,720,891	28,963,349	5.94%
Tier 2 Police & Fire	1,473,554	9,519,460	15.48%	1,365,520	9,213,933	14.82%
Tier 2 General Service	2,786,856	25,855,070	10.78%	2,765,638	26,055,958	10.61%
Total	**$10,675,197**	**$75,170,700**	**14.20%**	**$7,934,524**	**$77,123,747**	**10.29%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$100,092,201	$155,630,123
2. Next year's Tier 1/Tier 2 UAL payment	7,244,658	11,981,824
3. Combined valuation payroll	123,609,884	119,485,687
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.86%	10.03%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.20%	10.29%
b. Tier 1/Tier 2 UAL rate	5.86%	10.03%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.19%	20.45%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.75%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.75%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.95%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	86%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.75%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.75%
7. July 1, 2015 total pension rate, before adjustment	20.19%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.44%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	5.86%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.42%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.75%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.20%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.20%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.75%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.20%	10.29%
b. Tier 1/Tier 2 UAL rate	3.42%	7.93%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.75%	18.35%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$27,430,469	$12,365,701	$39,796,170
Tier 2	25,855,070	9,519,460	35,374,530
Tier 1/Tier 2 valuation payroll	53,285,539	21,885,161	75,170,700
OPSRP valuation payroll	37,561,339	10,877,845	48,439,184
Combined valuation payroll	**$90,846,878**	**$32,763,006**	**$123,609,884**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	390	407	749	1,546	425	426	668	1,519
Police & Fire	123	108	144	375	135	109	137	381
Total	513	515	893	1,921	560	535	805	1,900
Active Members with previous service segments with the employer								
General Service	223	153	N/A	376	275	196	N/A	471
Police & Fire	29	30	N/A	59	34	33	N/A	67
Total	252	183	N/A	435	309	229	N/A	538
Dormant Members								
General Service	307	238	51	596	309	232	43	584
Police & Fire	25	26	8	59	26	24	2	52
Total	332	264	59	655	335	256	45	636
Retired Members and Beneficiaries								
General Service	1,283	88	10	1,381	1,178	68	5	1,251
Police & Fire	294	16	0	310	283	14	0	297
Total	1,577	104	10	1,691	1,461	82	5	1,548
Grand Total Number of Members	**2,674**	**1,066**	**962**	**4,702**	**2,665**	**1,102**	**855**	**4,622**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29	1									**1**
30-34		10	21	1						**32**
35-39	1	15	71	17						**104**
40-44		11	70	58	11	1				**151**
45-49		14	67	69	36	7				**193**
50-54		12	52	39	38	15	4			**160**
55-59		8	46	51	50	23	17	3		**198**
60-64	2	5	31	36	41	19	7	2	1	**144**
65-69		3	13	12	7	2				**37**
70-74			3	1	1		1			**6**
75+			2							**2**
Total	**4**	**78**	**376**	**284**	**184**	**67**	**29**	**5**	**1**	**1,028**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29	4	145
30-34	21	368
35-39	40	813
40-44	93	1,207
45-49	79	1,197
50-54	86	925
55-59	121	956
60-64	90	888
65-69	40	589
70-74	13	430
75+	9	400
Total	596	932

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	7	1,560
45-49	14	1,504
50-54	36	2,634
55-59	153	2,017
60-64	386	1,949
65-69	450	1,995
70-74	290	1,635
75-79	157	1,389
80-84	105	1,299
85-89	55	958
90-94	23	1,024
95-99	5	435
100+		
Total	1,681	1,780

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Clackamas County Housing Authority/2518
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Clackamas County Housing Authority/2518

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Clackamas County Housing Authority -- #2518

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Clackamas County Housing Authority to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Clackamas County Housing Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Clackamas County Housing Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.35%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	2.15%	2.15%	2.15%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.10%**	**10.11%**	**14.21%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.66%**	**10.59%**	**14.69%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 89%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.50%	13.50%
Minimum July 1, 2015 Rate	10.50%	7.50%
Maximum July 1, 2015 Rate	16.50%	19.50%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$11,598,935	$10,761,023	($837,912)	108%	$1,799,293	(47%)
12/31/2008	8,613,000	11,233,387	2,620,387	77%	1,759,585	149%
12/31/2009	9,659,189	11,443,624	1,784,435	84%	2,068,743	86%
12/31/2010	10,112,860	12,051,368	1,938,508	84%	2,099,623	92%
12/31/2011	10,097,984	12,671,485	2,573,501	80%	2,168,456	119%
12/31/2012	11,306,674	12,635,796	1,329,122	89%	2,138,503	62%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Clackamas County Housing Authority

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,329,122	$2,573,501
Allocated pooled OPSRP UAL	150,728	36,999
Side account	0	0
Net unfunded pension actuarial accrued liability	1,479,850	2,610,500
Combined valuation payroll	2,138,503	2,168,456
Net pension UAL as a percentage of payroll	69%	120%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$44,867	$56,175

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$226,262	$139,043
Tier 1/Tier 2 valuation payroll	1,576,699	1,575,902
Tier 1/Tier 2 pension normal cost rate	14.35%	8.82%
Tier 1/ Tier 2 Actuarial accrued liability	$12,635,796	$12,671,485
Actuarial asset value	11,306,674	10,097,984
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,329,122	2,573,501
Tier 1/ Tier 2 Funded status	89%	80%
Combined valuation payroll	$2,138,503	$2,168,456
Tier 1/Tier 2 UAL as a percentage of payroll	62%	119%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	2.15%	7.68%
Tier 1/Tier 2 active members [1]	30	30
Tier 1/Tier 2 dormant members	9	10
Tier 1/Tier 2 retirees and beneficiaries	37	35

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	2,138,503	2,168,456
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,956,816	$1,801,547
2. Employer reserves	5,436,626	4,636,716
3. Benefits in force reserve	3,913,232	3,659,722
4. Total market value of assets *(1. + 2. + 3.)*	**$11,306,674**	**$10,097,984**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$10,097,984
2. Regular employer contributions	241,235
3. Benefit payments and expenses	(614,601)
4. Adjustments [2]	234,103
5. Interest credited	1,347,952
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$11,306,674**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	126,753	45,502
Tier 2 Police & Fire	0	0
Tier 2 General Service	99,509	93,541
Total	**$226,262**	**$139,043**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$149,808	$226,262	$76,454

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	2,944,002	3,316,515
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	1,602,560	1,140,956
▪ **Total Active Members**	**$4,546,562**	**$4,457,471**
Dormant Members	1,494,899	1,557,947
Retired Members and Beneficiaries	6,594,335	6,656,067
Total Actuarial Accrued Liability	**$12,635,796**	**$12,671,485**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$13,269,267	$12,635,796	($633,471)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$12,635,796	$12,671,485
2. Actuarial value of assets	11,306,674	10,097,984
3. Unfunded accrued liability *(1. – 2.)*	1,329,122	2,573,501
4. Funded percentage *(2. ÷ 1.)*	89%	80%
5. Combined valuation payroll	$2,138,503	$2,168,456
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	62%	119%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,329,122	$96,202
Total				**$1,329,122**	**$96,202**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$12,671,485
b. Normal cost at December 31, 2011	139,043
c. Benefit payments during 2012	(609,790)
d. Interest at 8.0% to December 31, 2012	1,000,451
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	13,201,189
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(633,471)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	12,567,718
2. Actuarial accrued liability at December 31, 2012	12,635,796
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(68,078)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	10,097,984
b. Contributions for 2012[1]	241,235
c. Benefit payments and expenses during 2012	(614,601)
d. Interest at 8.0% to December 31, 2012	792,904
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	10,517,523
5. Actuarial value of assets at December 31, 2012	11,306,674
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	789,151
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$721,073**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$2,573,501**
2. Expected increase	110,165
3. Liability (gain)/loss	68,078
4. Asset (gain)/loss	(789,151)
5. Change due to changes in assumptions, methods, and plan provisions	(633,471)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,329,122**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	126,753	740,514	17.12%	45,502	761,325	5.98%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	99,509	836,185	11.90%	93,541	814,577	11.48%
Total	**$226,262**	**$1,576,699**	**14.35%**	**$139,043**	**$1,575,902**	**8.82%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,329,122	$2,573,501
2. Next year's Tier 1/Tier 2 UAL payment	96,202	191,559
3. Combined valuation payroll	2,138,503	2,168,456
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.50%	8.83%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.35%	8.82%
b. Tier 1/Tier 2 UAL rate	4.50%	8.83%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.98%	17.78%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.50%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.50%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.70%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	89%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.50%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.50%
7. July 1, 2015 total pension rate, before adjustment	18.98%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.48%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.50%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.02%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.50%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.35%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.35%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.50%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.35%	8.82%
b. Tier 1/Tier 2 UAL rate	2.02%	7.55%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.50%	16.50%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$740,514	$0	$740,514
Tier 2	836,185	0	836,185
Tier 1/Tier 2 valuation payroll	1,576,699	0	1,576,699
OPSRP valuation payroll	561,804	0	561,804
Combined valuation payroll	**$2,138,503**	**$0**	**$2,138,503**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	13	17	10	40	14	16	12	42
Police & Fire	0	0	0	0	0	0	0	0
Total	13	17	10	40	14	16	12	42
Active Members with previous service segments with the employer								
General Service	4	2	N/A	6	4	5	N/A	9
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	4	2	N/A	6	4	5	N/A	9
Dormant Members								
General Service	9	0	2	11	9	1	0	10
Police & Fire	0	0	0	0	0	0	0	0
Total	9	0	2	11	9	1	0	10
Retired Members and Beneficiaries								
General Service	31	6	0	37	29	6	0	35
Police & Fire	0	0	0	0	0	0	0	0
Total	31	6	0	37	29	6	0	35
Grand Total Number of Members	**57**	**25**	**12**	**94**	**56**	**28**	**12**	**96**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							1
35-39										
40-44		1	1							2
45-49			2	2						4
50-54		2	4	1	1	1				9
55-59			1	1		3				5
60-64			2	3	1	1				7
65-69			2							2
70-74										
75+										
Total	0	3	13	7	2	5	0	0	0	30

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	2	2,612
50-54	4	2,035
55-59	2	1,276
60-64		
65-69	1	299
70-74		
75+		
Total	9	1,802

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	3	1,553
60-64	9	1,726
65-69	9	1,200
70-74	5	1,269
75-79	7	1,372
80-84		
85-89	2	1,172
90-94	1	6
95-99	1	341
100+		
Total	37	1,341

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Willamina/2189
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Willamina/2189

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Willamina/2189

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Willamina -- #2189

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Willamina to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Willamina.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Willamina

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.34%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(11.90%)	(11.90%)	(11.90%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**0.16%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**0.64%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 157%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,282,173	$1,084,238	($1,197,935)	210%	$135,702	(883%)
12/31/2008	1,760,004	1,113,927	(646,077)	158%	205,155	(315%)
12/31/2009	2,035,372	1,205,530	(829,842)	169%	269,485	(308%)
12/31/2010	2,130,802	1,190,844	(939,958)	179%	289,477	(325%)
12/31/2011	2,108,150	1,299,674	(808,476)	162%	315,834	(256%)
12/31/2012	2,290,038	1,461,888	(828,150)	157%	304,738	(272%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Willamina

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($828,150)	($808,476)
Allocated pooled OPSRP UAL	21,479	5,389
Side account	0	0
Net unfunded pension actuarial accrued liability	(806,671)	(803,087)
Combined valuation payroll	304,738	315,834
Net pension UAL as a percentage of payroll	(265%)	(254%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$6,394	$8,182

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$19,281	$12,597
Tier 1/Tier 2 valuation payroll	162,077	186,452
Tier 1/Tier 2 pension normal cost rate	17.34%	12.17%
Tier 1/ Tier 2 Actuarial accrued liability	$1,461,888	$1,299,674
Actuarial asset value	2,290,038	2,108,150
Tier 1/Tier 2 Unfunded actuarial accrued liability	(828,150)	(808,476)
Tier 1/ Tier 2 Funded status	157%	162%
Combined valuation payroll	$304,738	$315,834
Tier 1/Tier 2 UAL as a percentage of payroll	(272%)	(256%)
Tier 1/Tier 2 UAL rate	(11.90%)	(6.76%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	5	5
Tier 1/Tier 2 dormant members	4	5
Tier 1/Tier 2 retirees and beneficiaries	11	10

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	304,738	315,834
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$270,336	$344,748
2. Employer reserves	1,610,514	1,510,253
3. Benefits in force reserve	409,188	253,149
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,290,038**	**$2,108,150**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$2,108,150
2.	Regular employer contributions	511
3.	Benefit payments and expenses	(64,266)
4.	Adjustments [2]	(32,937)
5.	Interest credited	278,579
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,290,038**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	9,188	4,619
Tier 2 Police & Fire	0	0
Tier 2 General Service	10,093	7,978
Total	**$19,281**	**$12,597**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$8,817	$19,281	$10,464

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$79,306	$75,609
▪ Tier 1 General Service	301,676	288,803
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	233,935	158,247
▪ **Total Active Members**	**$614,917**	**$522,659**
Dormant Members	157,432	316,603
Retired Members and Beneficiaries	689,539	460,412
Total Actuarial Accrued Liability	**$1,461,888**	**$1,299,674**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,487,139	$1,461,888	($25,251)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,461,888	$1,299,674
2. Actuarial value of assets	2,290,038	2,108,150
3. Unfunded accrued liability *(1. – 2.)*	(828,150)	(808,476)
4. Funded percentage *(2. ÷ 1.)*	157%	162%
5. Combined valuation payroll	$304,738	$315,834
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(272%)	(256%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($828,150)	($59,941)
Total				**($828,150)**	**($59,941)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,299,674
b. Normal cost at December 31, 2011	12,597
c. Benefit payments during 2012	(63,763)
d. Interest at 8.0% to December 31, 2012	102,431
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,350,939
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(25,251)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,325,688
2. Actuarial accrued liability at December 31, 2012	1,461,888
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(136,200)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,108,150
b. Contributions for 2012[1]	511
c. Benefit payments and expenses during 2012	(64,266)
d. Interest at 8.0% to December 31, 2012	166,102
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,210,498
5. Actuarial value of assets at December 31, 2012	2,290,038
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	79,541
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($56,659)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($808,476)**
2. Expected increase	(51,082)
3. Liability (gain)/loss	136,200
4. Asset (gain)/loss	(79,541)
5. Change due to changes in assumptions, methods, and plan provisions	(25,251)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($828,150)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	9,188	50,694	18.12%	4,619	79,818	5.79%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	10,093	111,383	9.06%	7,978	106,634	7.48%
Total	**$19,281**	**$162,077**	**11.90%**	**$12,597**	**$186,452**	**6.76%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($828,150)	($808,476)
2. Next year's Tier 1/Tier 2 UAL payment	(59,941)	(72,491)
3. Combined valuation payroll	304,738	315,834
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(19.67%)	(22.95%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.90%	6.76%
b. Tier 1/Tier 2 UAL rate	(19.67%)	(22.95%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	(7.64%)	(16.06%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	157%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	(7.64%)
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	7.64%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(19.67%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(12.03%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	0.00%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	5.44%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.90%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.34%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.34%	12.17%
b. Tier 1/Tier 2 UAL rate	(12.03%)	(6.89%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$50,694	$0	$50,694
Tier 2	111,383	0	111,383
Tier 1/Tier 2 valuation payroll	162,077	0	162,077
OPSRP valuation payroll	142,661	0	142,661
Combined valuation payroll	**$304,738**	**$0**	**$304,738**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	3	4	9	2	3	3	8
Police & Fire	0	0	0	0	0	0	0	0
Total	2	3	4	9	2	3	3	8
Active Members with previous service segments with the employer								
General Service	4	1	N/A	5	4	1	N/A	5
Police & Fire	1	0	N/A	1	1	0	N/A	1
Total	5	1	N/A	6	5	1	N/A	6
Dormant Members								
General Service	1	3	0	4	1	3	0	4
Police & Fire	0	0	0	0	1	0	0	1
Total	1	3	0	4	2	3	0	5
Retired Members and Beneficiaries								
General Service	5	0	0	5	5	0	0	5
Police & Fire	6	0	0	6	5	0	0	5
Total	11	0	0	11	10	0	0	10
Grand Total Number of Members	**19**	**7**	**4**	**30**	**19**	**7**	**3**	**29**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29			1							**1**
30-34										
35-39										
40-44										
45-49		1		1						**2**
50-54										
55-59										
60-64										
65-69				1						**1**
70-74					1					**1**
75+										
Total	**0**	**1**	**1**	**2**	**1**	**0**	**0**	**0**	**0**	**5**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	232
50-54		
55-59	2	487
60-64	1	65
65-69		
70-74		
75+		
Total	4	318

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	334
55-59	3	169
60-64	2	789
65-69	2	610
70-74	2	369
75-79	1	155
80-84		
85-89		
90-94		
95-99		
100+		
Total	11	412

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Weston/2206
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Weston/2206

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Weston/2206

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Weston -- #2206

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Weston to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Weston.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Weston

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.28%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.87%)	(2.87%)	(2.87%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**5.09%**	**9.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**5.57%**	**9.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 102%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,178,613	$818,039	($360,574)	144%	$139,196	(259%)
12/31/2008	901,552	792,864	(108,688)	114%	175,726	(62%)
12/31/2009	1,007,845	738,301	(269,544)	137%	142,131	(190%)
12/31/2010	1,105,508	853,708	(251,800)	129%	189,752	(133%)
12/31/2011	948,286	1,032,925	84,639	92%	239,512	35%
12/31/2012	1,018,294	1,000,088	(18,206)	102%	206,346	(9%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Weston

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($18,206)	$84,639
Allocated pooled OPSRP UAL	14,544	4,087
Side account	0	0
Net unfunded pension actuarial accrued liability	(3,662)	88,726
Combined valuation payroll	206,346	239,512
Net pension UAL as a percentage of payroll	(2%)	37%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$4,329	$6,205

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$4,232	$9,473
Tier 1/Tier 2 valuation payroll	37,524	71,291
Tier 1/Tier 2 pension normal cost rate	11.28%	13.29%
Tier 1/ Tier 2 Actuarial accrued liability	$1,000,088	$1,032,925
Actuarial asset value	1,018,294	948,286
Tier 1/Tier 2 Unfunded actuarial accrued liability	(18,206)	84,639
Tier 1/ Tier 2 Funded status	102%	92%
Combined valuation payroll	$206,346	$239,512
Tier 1/Tier 2 UAL as a percentage of payroll	(9%)	35%
Tier 1/Tier 2 UAL rate	(2.87%)	(4.88%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	2
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	7	7

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	206,346	239,512
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$91,854	$80,460
2. Employer reserves	486,308	438,873
3. Benefits in force reserve	440,132	428,953
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,018,294**	**$948,286**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$948,286
2. Regular employer contributions	(14,525)
3. Benefit payments and expenses	(69,126)
4. Adjustments[2]	26,979
5. Interest credited	126,679
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,018,294**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	4,232	9,473
Total	**$4,232**	**$9,473**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,928	$4,232	($696)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$104,772	$100,892
▪ Tier 1 General Service	10,382	11,051
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	143,251	140,830
▪ **Total Active Members**	**$258,405**	**$252,773**
Dormant Members	0	0
Retired Members and Beneficiaries	741,683	780,152
Total Actuarial Accrued Liability	**$1,000,088**	**$1,032,925**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,038,722	$1,000,088	($38,634)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,000,088	$1,032,925
2. Actuarial value of assets	1,018,294	948,286
3. Unfunded accrued liability *(1. – 2.)*	(18,206)	84,639
4. Funded percentage *(2. ÷ 1.)*	102%	92%
5. Combined valuation payroll	$206,346	$239,512
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(9%)	35%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($18,206)	($1,318)
Total				**($18,206)**	**($1,318)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,032,925
b. Normal cost at December 31, 2011	9,473
c. Benefit payments during 2012	(68,585)
d. Interest at 8.0% to December 31, 2012	80,648
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,054,461
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(38,634)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,015,827
2. Actuarial accrued liability at December 31, 2012	1,000,088
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	15,739
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	948,286
b. Contributions for 2012[1]	(14,525)
c. Benefit payments and expenses during 2012	(69,126)
d. Interest at 8.0% to December 31, 2012	72,517
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	937,152
5. Actuarial value of assets at December 31, 2012	1,018,294
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	81,142
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$96,881**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$84,639**
2. Expected increase	32,670
3. Liability (gain)/loss	(15,739)
4. Asset (gain)/loss	(81,142)
5. Change due to changes in assumptions, methods, and plan provisions	(38,634)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($18,206)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	4,232	37,524	11.28%	9,473	71,291	13.29%
Total	**$4,232**	**$37,524**	**11.28%**	**$9,473**	**$71,291**	**13.29%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($18,206)	$84,639
2. Next year's Tier 1/Tier 2 UAL payment	(1,318)	2,379
3. Combined valuation payroll	206,346	239,512
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.64%)	0.99%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.28%	13.29%
b. Tier 1/Tier 2 UAL rate	(0.64%)	0.99%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.77%	14.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	102%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	10.77%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.36%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(0.64%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.00%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.28%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.28%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.28%	13.29%
b. Tier 1/Tier 2 UAL rate	(3.00%)	(5.01%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	8.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	37,524	0	37,524
Tier 1/Tier 2 valuation payroll	37,524	0	37,524
OPSRP valuation payroll	116,997	51,825	168,822
Combined valuation payroll	**$154,521**	**$51,825**	**$206,346**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	3	4	0	2	3	5
Police & Fire	0	0	1	1	0	0	2	2
Total	0	1	4	5	0	2	5	7
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	1	0	N/A	1
Police & Fire	0	0	N/A	0	1	0	N/A	1
Total	0	1	N/A	1	2	0	N/A	2
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	3	1	0	4	3	1	0	4
Police & Fire	2	1	0	3	2	1	0	3
Total	5	2	0	7	5	2	0	7
Grand Total Number of Members	**5**	**4**	**4**	**13**	**7**	**4**	**5**	**16**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59				1						**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	254
60-64	4	978
65-69	1	6
70-74		
75-79		
80-84	1	1,078
85-89		
90-94		
95-99		
100+		
Total	7	750

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Westfir/2265
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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December 2013
City of Westfir/2265

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Westfir -- #2265

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Westfir to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Westfir.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Westfir

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.38%)	(2.38%)	(2.38%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.55%**	**5.58%**	**9.68%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**13.11%**	**6.06%**	**10.16%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 129%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.95%	11.95%
Minimum July 1, 2015 Rate	8.95%	5.95%
Maximum July 1, 2015 Rate	14.95%	17.95%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$160,871	$133,390	($27,481)	121%	$43,357	(63%)
12/31/2008	131,276	143,252	11,976	92%	46,695	26%
12/31/2009	98,230	82,913	(15,317)	118%	31,117	(49%)
12/31/2010	108,493	110,815	2,322	98%	0	0%
12/31/2011	92,868	79,032	(13,836)	118%	15,361	(90%)
12/31/2012	98,011	76,112	(21,899)	129%	63,072	(35%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Westfir

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($21,899)	($13,836)
Allocated pooled OPSRP UAL	4,445	262
Side account	0	0
Net unfunded pension actuarial accrued liability	(17,454)	(13,574)
Combined valuation payroll	63,072	15,361
Net pension UAL as a percentage of payroll	(28%)	(88%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,323	$398

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	14.33%	11.13%
Tier 1/ Tier 2 Actuarial accrued liability	$76,112	$79,032
Actuarial asset value	98,011	92,868
Tier 1/Tier 2 Unfunded actuarial accrued liability	(21,899)	(13,836)
Tier 1/ Tier 2 Funded status	129%	118%
Combined valuation payroll	$63,072	$15,361
Tier 1/Tier 2 UAL as a percentage of payroll	(35%)	(90%)
Tier 1/Tier 2 UAL rate	(2.38%)	(5.72%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	63,072	15,361
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$4,007	$3,491
2. Employer reserves	51,182	47,817
3. Benefits in force reserve	42,821	41,559
4. Total market value of assets *(1. + 2. + 3.)*	**$98,011**	**$92,868**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$92,868
2.	Regular employer contributions	(2,990)
3.	Benefit payments and expenses	(6,725)
4.	Adjustments [2]	2,496
5.	Interest credited	12,363
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$98,011**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	3,952	3,446
Retired Members and Beneficiaries	72,160	75,586
Total Actuarial Accrued Liability	**$76,112**	**$79,032**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$78,085	$76,112	($1,973)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$76,112	$79,032
2. Actuarial value of assets	98,011	92,868
3. Unfunded accrued liability *(1. – 2.)*	(21,899)	(13,836)
4. Funded percentage *(2. ÷ 1.)*	129%	118%
5. Combined valuation payroll	$63,072	$15,361
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(35%)	(90%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($21,899)	($1,585)
Total				**($21,899)**	**($1,585)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$79,032
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	(6,673)
d. Interest at 8.0% to December 31, 2012	6,056
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	78,415
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,973)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	76,442
2. Actuarial accrued liability at December 31, 2012	76,112
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	330
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	92,868
b. Contributions for 2012[1]	(2,990)
c. Benefit payments and expenses during 2012	(6,725)
d. Interest at 8.0% to December 31, 2012	7,041
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	90,193
5. Actuarial value of assets at December 31, 2012	98,011
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	7,818
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$8,148**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($13,836)**
2. Expected increase	2,058
3. Liability (gain)/loss	(330)
4. Asset (gain)/loss	(7,818)
5. Change due to changes in assumptions, methods, and plan provisions	(1,973)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($21,899)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**14.33%**	**$0**	**$0**	**10.82%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($21,899)	($13,836)
2. Next year's Tier 1/Tier 2 UAL payment	(1,585)	(1,290)
3. Combined valuation payroll	63,072	15,361
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.51%)	(8.40%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	(2.51%)	(8.40%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	11.95%	2.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.95%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.95%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	11.13%
b. Tier 1/Tier 2 UAL rate	(2.51%)	(5.85%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.95%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	63,072	0	63,072
Combined valuation payroll	**$63,072**	**$0**	**$63,072**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	2	2	0	0	2	2
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	2	2	0	0	2	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	1	1	0	2	1	1	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	0	2	1	1	0	2
Grand Total Number of Members	**1**	**2**	**2**	**5**	**1**	**2**	**2**	**5**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69	1	329
70-74		
75+		
Total	1	329

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	227
70-74		
75-79		
80-84	1	615
85-89		
90-94		
95-99		
100+		
Total	2	421

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Waldport/2261
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Waldport/2261

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Waldport/2261

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Waldport -- #2261

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Waldport to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Waldport.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Waldport

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.71%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.86%)	(2.86%)	(2.86%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**10.45%**	**5.10%**	**9.20%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.01%**	**5.58%**	**9.68%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 107%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	6.85%	6.85%
Minimum July 1, 2015 Rate	3.85%	0.85%
Maximum July 1, 2015 Rate	9.85%	12.85%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$3,216,713	$2,368,891	($847,822)	136%	$476,282	(178%)
12/31/2008	2,413,499	2,554,725	141,226	94%	617,388	23%
12/31/2009	2,741,234	2,692,200	(49,034)	102%	649,400	(8%)
12/31/2010	2,981,867	2,802,015	(179,852)	106%	636,529	(28%)
12/31/2011	2,991,828	2,932,896	(58,932)	102%	640,777	(9%)
12/31/2012	3,384,024	3,149,005	(235,019)	107%	689,451	(34%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Waldport

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($235,019)	($58,932)
Allocated pooled OPSRP UAL	48,594	10,933
Side account	0	0
Net unfunded pension actuarial accrued liability	(186,425)	(47,999)
Combined valuation payroll	689,451	640,777
Net pension UAL as a percentage of payroll	(27%)	(7%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$14,465	$16,600

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$68,486	$56,557
Tier 1/Tier 2 valuation payroll	538,990	518,141
Tier 1/Tier 2 pension normal cost rate	12.71%	10.92%
Tier 1/ Tier 2 Actuarial accrued liability	$3,149,005	$2,932,896
Actuarial asset value	3,384,024	2,991,828
Tier 1/Tier 2 Unfunded actuarial accrued liability	(235,019)	(58,932)
Tier 1/ Tier 2 Funded status	107%	102%
Combined valuation payroll	$689,451	$640,777
Tier 1/Tier 2 UAL as a percentage of payroll	(34%)	(9%)
Tier 1/Tier 2 UAL rate	(2.86%)	(1.57%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	10	10
Tier 1/Tier 2 dormant members	5	5
Tier 1/Tier 2 retirees and beneficiaries	18	17

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	689,451	640,777
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$600,251	$543,796
2. Employer reserves	2,099,743	1,811,132
3. Benefits in force reserve	684,030	636,900
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,384,024**	**$2,991,828**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$2,991,828
2.	Regular employer contributions	45,959
3.	Benefit payments and expenses	(107,432)
4.	Adjustments[2]	52,197
5.	Interest credited	401,472
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,384,024**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	45,314	33,476
Tier 2 Police & Fire	0	0
Tier 2 General Service	23,172	23,081
Total	**$68,486**	**$56,557**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$62,406	$68,486	$6,080

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$221,456	$105,714
▪ Tier 1 General Service	918,429	864,542
▪ Tier 2 Police & Fire	0	7,640
▪ Tier 2 General Service	450,344	393,871
▪ **Total Active Members**	**$1,590,229**	**$1,371,767**
Dormant Members	406,090	402,776
Retired Members and Beneficiaries	1,152,686	1,158,353
Total Actuarial Accrued Liability	**$3,149,005**	**$2,932,896**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$3,222,533	$3,149,005	($73,528)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,149,005	$2,932,896
2. Actuarial value of assets	3,384,024	2,991,828
3. Unfunded accrued liability *(1. – 2.)*	(235,019)	(58,932)
4. Funded percentage *(2. ÷ 1.)*	107%	102%
5. Combined valuation payroll	$689,451	$640,777
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(34%)	(9%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($235,019)	($17,011)
Total				**($235,019)**	**($17,011)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$2,932,896
b. Normal cost at December 31, 2011	56,557
c. Benefit payments during 2012	(106,591)
d. Interest at 8.0% to December 31, 2012	234,893
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,117,755
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(73,528)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,044,227
2. Actuarial accrued liability at December 31, 2012	3,149,005
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(104,778)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,991,828
b. Contributions for 2012[1]	45,959
c. Benefit payments and expenses during 2012	(107,432)
d. Interest at 8.0% to December 31, 2012	236,887
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,167,242
5. Actuarial value of assets at December 31, 2012	3,384,024
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	216,781
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$112,003**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($58,932)**
2. Expected increase	9,444
3. Liability (gain)/loss	104,778
4. Asset (gain)/loss	(216,781)
5. Change due to changes in assumptions, methods, and plan provisions	(73,528)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($235,019)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	45,314	361,568	12.53%	33,476	344,820	9.71%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	23,172	177,422	13.06%	23,081	173,321	13.32%
Total	**$68,486**	**$538,990**	**12.71%**	**$56,557**	**$518,141**	**10.92%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($235,019)	($58,932)
2. Next year's Tier 1/Tier 2 UAL payment	(17,011)	(10,920)
3. Combined valuation payroll	689,451	640,777
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.47%)	(1.70%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.71%	10.92%
b. Tier 1/Tier 2 UAL rate	(2.47%)	(1.70%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.37%	9.35%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	6.85%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	6.85%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.37%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	107%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	3.85%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	9.85%
7. July 1, 2015 total pension rate, before adjustment	10.37%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.52%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.47%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.99%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	9.85%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.71%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.71%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	9.85%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.71%	10.92%
b. Tier 1/Tier 2 UAL rate	(2.99%)	(1.70%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	9.85%	9.35%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$361,568	$0	$361,568
Tier 2	177,422	0	177,422
Tier 1/Tier 2 valuation payroll	538,990	0	538,990
OPSRP valuation payroll	150,461	0	150,461
Combined valuation payroll	**$689,451**	**$0**	**$689,451**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	7	3	5	15	7	3	3	13
Police & Fire	0	0	0	0	0	0	0	0
Total	7	3	5	15	7	3	3	13
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	1	1	N/A	2
Police & Fire	3	0	N/A	3	3	1	N/A	4
Total	3	1	N/A	4	4	2	N/A	6
Dormant Members								
General Service	3	0	0	3	3	0	0	3
Police & Fire	1	1	0	2	1	1	0	2
Total	4	1	0	5	4	1	0	5
Retired Members and Beneficiaries								
General Service	10	2	0	12	9	2	0	11
Police & Fire	6	0	0	6	6	0	0	6
Total	16	2	0	18	15	2	0	17
Grand Total Number of Members	**30**	**7**	**5**	**42**	**30**	**8**	**3**	**41**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44				1						1
45-49										
50-54			1	1						2
55-59			1	1	1					3
60-64			1	2	1					4
65-69										
70-74										
75+										
Total	0	0	3	5	2	0	0	0	0	10

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	2,815
55-59	3	408
60-64		
65-69		
70-74	1	85
75+		
Total	5	825

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	830
55-59	1	322
60-64	4	464
65-69	5	582
70-74	2	152
75-79	1	233
80-84	3	755
85-89	1	872
90-94		
95-99		
100+		
Total	18	533

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Sweet Home/2129
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Sweet Home/2129

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Sweet Home -- #2129

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Sweet Home to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Sweet Home.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Sweet Home

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.07%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(9.63%)	(9.63%)	(9.63%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**2.43%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**2.91%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 117%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$7,148,035	$4,825,288	($2,322,747)	148%	$751,771	(309%)
12/31/2008	5,349,083	5,001,138	(347,945)	107%	803,558	(43%)
12/31/2009	6,230,307	5,371,122	(859,185)	116%	817,510	(105%)
12/31/2010	6,905,331	5,733,310	(1,172,021)	120%	860,986	(136%)
12/31/2011	6,785,370	6,077,241	(708,129)	112%	636,038	(111%)
12/31/2012	7,035,389	5,996,351	(1,039,038)	117%	770,371	(135%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Sweet Home

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($1,039,038)	($708,129)
Allocated pooled OPSRP UAL	54,298	10,852
Side account	0	0
Net unfunded pension actuarial accrued liability	(984,740)	(697,277)
Combined valuation payroll	770,371	636,038
Net pension UAL as a percentage of payroll	(128%)	(110%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$16,163	$16,477

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$63,461	$71,302
Tier 1/Tier 2 valuation payroll	453,422	512,692
Tier 1/Tier 2 pension normal cost rate	15.07%	16.77%
Tier 1/ Tier 2 Actuarial accrued liability	$5,996,351	$6,077,241
Actuarial asset value	7,035,389	6,785,370
Tier 1/Tier 2 Unfunded actuarial accrued liability	(1,039,038)	(708,129)
Tier 1/ Tier 2 Funded status	117%	112%
Combined valuation payroll	$770,371	$636,038
Tier 1/Tier 2 UAL as a percentage of payroll	(135%)	(111%)
Tier 1/Tier 2 UAL rate	(9.63%)	(11.36%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	7	8
Tier 1/Tier 2 dormant members	6	5
Tier 1/Tier 2 retirees and beneficiaries	12	10

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	770,371	636,038
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,038,590	$1,151,382
2. Employer reserves	4,467,566	4,289,088
3. Benefits in force reserve	1,529,233	1,344,900
4. Total market value of assets *(1. + 2. + 3.)*	**$7,035,389**	**$6,785,370**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$6,785,370
2. Regular employer contributions	3,674
3. Benefit payments and expenses	(240,177)
4. Adjustments[2]	(372,317)
5. Interest credited	858,839
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$7,035,389**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$11,639	$24,346
Tier 1 General Service	0	0
Tier 2 Police & Fire	44,876	41,028
Tier 2 General Service	6,946	5,928
Total	**$63,461**	**$71,302**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$60,802	$63,461	$2,659

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$1,692,811	$2,389,428
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	1,218,398	876,914
▪ Tier 2 General Service	117,333	76,976
▪ **Total Active Members**	**$3,028,542**	**$3,343,318**
Dormant Members	390,841	287,906
Retired Members and Beneficiaries	2,576,968	2,446,017
Total Actuarial Accrued Liability	**$5,996,351**	**$6,077,241**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$5,985,858	$5,996,351	$10,493

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$5,996,351	$6,077,241
2. Actuarial value of assets	7,035,389	6,785,370
3. Unfunded accrued liability *(1. – 2.)*	(1,039,038)	(708,129)
4. Funded percentage *(2. ÷ 1.)*	117%	112%
5. Combined valuation payroll	$770,371	$636,038
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(135%)	(111%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($1,039,038)	($75,205)
Total				**($1,039,038)**	**($75,205)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$6,077,241
b. Normal cost at December 31, 2011	71,302
c. Benefit payments during 2012	(238,297)
d. Interest at 8.0% to December 31, 2012	482,352
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	6,392,598
f. Change in actuarial accrued liability due to assumption, method, and plan changes	10,493
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	6,403,091
2. Actuarial accrued liability at December 31, 2012	5,996,351
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	406,740
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	6,785,370
b. Contributions for 2012[1]	3,674
c. Benefit payments and expenses during 2012	(240,177)
d. Interest at 8.0% to December 31, 2012	533,369
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	7,082,236
5. Actuarial value of assets at December 31, 2012	7,035,389
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(46,847)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$359,893**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($708,129)**
2. Expected increase	18,491
3. Liability (gain)/loss	(406,740)
4. Asset (gain)/loss	46,847
5. Change due to changes in assumptions, methods, and plan provisions	10,493
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($1,039,038)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$11,639	$71,552	16.27%	$24,346	$135,580	17.96%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	44,876	309,560	14.50%	41,028	307,716	13.33%
Tier 2 General Service	6,946	72,310	9.61%	5,928	69,396	8.54%
Total	**$63,461**	**$453,422**	**14.00%**	**$71,302**	**$512,692**	**13.91%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($1,039,038)	($708,129)
2. Next year's Tier 1/Tier 2 UAL payment	(75,205)	(73,092)
3. Combined valuation payroll	770,371	636,038
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(9.76%)	(11.49%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.00%	13.91%
b. Tier 1/Tier 2 UAL rate	(9.76%)	(11.49%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	4.37%	2.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	117%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	4.37%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(9.76%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(9.76%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	4.37%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	1.07%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.00%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.07%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.07%	16.77%
b. Tier 1/Tier 2 UAL rate	(9.76%)	(11.49%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$71,552	$71,552
Tier 2	72,310	309,560	381,870
Tier 1/Tier 2 valuation payroll	72,310	381,112	453,422
OPSRP valuation payroll	0	316,949	316,949
Combined valuation payroll	**$72,310**	**$698,061**	**$770,371**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	1	5	6	12	2	5	2	9
Total	1	6	6	13	2	6	2	10
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	12	8	N/A	20	21	13	N/A	34
Total	12	8	N/A	20	21	13	N/A	34
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	4	2	1	7	3	2	2	7
Total	4	2	1	7	3	2	2	7
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	12	0	0	12	10	0	0	10
Total	12	0	0	12	10	0	0	10
Grand Total Number of Members	**29**	**16**	**7**	**52**	**36**	**21**	**4**	**61**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34			1							**1**
35-39			3							**3**
40-44		1	1	1						**3**
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**1**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**7**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	33
35-39	1	196
40-44	1	1,140
45-49	1	937
50-54	1	2,086
55-59	1	160
60-64		
65-69		
70-74		
75+		
Total	6	759

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	96
55-59	4	2,218
60-64	2	1,071
65-69	5	965
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	12	1,328

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Stanfield/2213
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
City of Stanfield/2213

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Stanfield/2213

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Stanfield -- #2213

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Stanfield to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Stanfield.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Stanfield

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.90%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(11.46%)	(11.46%)	(11.46%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**0.60%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**1.08%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 139%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,242,254	$1,352,522	($889,732)	166%	$353,604	(252%)
12/31/2008	1,669,932	1,432,526	(237,406)	117%	343,370	(69%)
12/31/2009	1,933,173	1,510,326	(422,847)	128%	324,357	(130%)
12/31/2010	2,098,371	1,564,203	(534,168)	134%	416,738	(128%)
12/31/2011	2,037,197	1,602,362	(434,835)	127%	379,898	(114%)
12/31/2012	2,276,037	1,638,465	(637,572)	139%	398,287	(160%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Stanfield

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($637,572)	($434,835)
Allocated pooled OPSRP UAL	28,072	6,482
Side account	0	0
Net unfunded pension actuarial accrued liability	(609,500)	(428,353)
Combined valuation payroll	398,287	379,898
Net pension UAL as a percentage of payroll	(153%)	(113%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$8,356	$9,841

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$33,516	$21,139
Tier 1/Tier 2 valuation payroll	208,845	228,912
Tier 1/Tier 2 pension normal cost rate	16.90%	14.33%
Tier 1/ Tier 2 Actuarial accrued liability	$1,638,465	$1,602,362
Actuarial asset value	2,276,037	2,037,197
Tier 1/Tier 2 Unfunded actuarial accrued liability	(637,572)	(434,835)
Tier 1/ Tier 2 Funded status	139%	127%
Combined valuation payroll	$398,287	$379,898
Tier 1/Tier 2 UAL as a percentage of payroll	(160%)	(114%)
Tier 1/Tier 2 UAL rate	(11.46%)	(8.92%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	7	6
Tier 1/Tier 2 dormant members	7	6
Tier 1/Tier 2 retirees and beneficiaries	13	13

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	398,287	379,898
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$267,152	$233,741
2. Employer reserves	1,577,597	1,384,254
3. Benefits in force reserve	431,288	419,201
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,276,037**	**$2,037,197**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$2,037,197
2.	Regular employer contributions	(4,338)
3.	Benefit payments and expenses	(67,737)
4.	Adjustments[2]	34,369
5.	Interest credited	276,546
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,276,037**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	12,229	1,814
Tier 2 Police & Fire	17,789	16,987
Tier 2 General Service	3,498	2,338
Total	**$33,516**	**$21,139**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$18,133	$33,516	$15,383

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$46,181	$40,986
▪ Tier 1 General Service	231,625	254,252
▪ Tier 2 Police & Fire	222,849	174,422
▪ Tier 2 General Service	82,827	56,275
▪ **Total Active Members**	**$583,482**	**$525,935**
Dormant Members	328,203	314,011
Retired Members and Beneficiaries	726,780	762,416
Total Actuarial Accrued Liability	**$1,638,465**	**$1,602,362**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,673,973	$1,638,465	($35,508)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,638,465	$1,602,362
2. Actuarial value of assets	2,276,037	2,037,197
3. Unfunded accrued liability *(1. – 2.)*	(637,572)	(434,835)
4. Funded percentage *(2. ÷ 1.)*	139%	127%
5. Combined valuation payroll	$398,287	$379,898
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(160%)	(114%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($637,572)	($46,147)
Total				**($637,572)**	**($46,147)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,602,362
b. Normal cost at December 31, 2011	21,139
c. Benefit payments during 2012	(67,207)
d. Interest at 8.0% to December 31, 2012	127,192
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,683,486
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(35,508)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,647,978
2. Actuarial accrued liability at December 31, 2012	1,638,465
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	9,513
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,037,197
b. Contributions for 2012[1]	(4,338)
c. Benefit payments and expenses during 2012	(67,737)
d. Interest at 8.0% to December 31, 2012	160,093
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,125,215
5. Actuarial value of assets at December 31, 2012	2,276,037
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	150,822
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$160,335**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($434,835)**
2. Expected increase	(6,894)
3. Liability (gain)/loss	(9,513)
4. Asset (gain)/loss	(150,822)
5. Change due to changes in assumptions, methods, and plan provisions	(35,508)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($637,572)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	12,229	77,601	15.76%	1,814	63,032	2.88%
Tier 2 Police & Fire	17,789	93,534	19.02%	16,987	129,899	13.08%
Tier 2 General Service	3,498	37,710	9.28%	2,338	35,981	6.50%
Total	**$33,516**	**$208,845**	**16.05%**	**$21,139**	**$228,912**	**9.23%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($637,572)	($434,835)
2. Next year's Tier 1/Tier 2 UAL payment	(46,147)	(40,583)
3. Combined valuation payroll	398,287	379,898
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(11.59%)	(10.68%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.05%	9.23%
b. Tier 1/Tier 2 UAL rate	(11.59%)	(10.68%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	4.59%	(1.32%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	5.41%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	139%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	5.70%
5.	July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6.	July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.11%
7.	July 1, 2015 total pension rate, before adjustment	4.59%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9.	July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(11.59%)
10.	July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(11.59%)
11.	July 1, 2015 Tier 1/Tier 2 pension rate, after collar	4.59%
12.	Tier 1/Tier 2 retiree healthcare rate	0.56%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.85%
14.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.05%
15.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.90%
16.	July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.90%	14.33%
b. Tier 1/Tier 2 UAL rate	(11.59%)	(9.05%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$77,601	$0	$77,601
Tier 2	37,710	93,534	131,244
Tier 1/Tier 2 valuation payroll	115,311	93,534	208,845
OPSRP valuation payroll	125,158	64,284	189,442
Combined valuation payroll	**$240,469**	**$157,818**	**$398,287**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	2	5	9	1	2	5	8
Police & Fire	0	3	2	5	0	3	1	4
Total	2	5	7	14	1	5	6	12
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	0	1	N/A	1	2	2	N/A	4
Total	0	1	N/A	1	3	2	N/A	5
Dormant Members								
General Service	2	2	1	5	2	2	0	4
Police & Fire	1	2	0	3	1	1	1	3
Total	3	4	1	8	3	3	1	7
Retired Members and Beneficiaries								
General Service	6	1	0	7	6	1	0	7
Police & Fire	6	0	0	6	6	0	0	6
Total	12	1	0	13	12	1	0	13
Grand Total Number of Members	**17**	**11**	**8**	**36**	**19**	**11**	**7**	**37**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		1	1							**2**
35-39			1							**1**
40-44			1							**1**
45-49					1					**1**
50-54										
55-59				1						**1**
60-64										
65-69										
70-74										
75+			1							**1**
Total	**0**	**1**	**4**	**1**	**1**	**0**	**0**	**0**	**0**	**7**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	324
40-44		
45-49	2	1,328
50-54	1	82
55-59	2	414
60-64		
65-69	1	206
70-74		
75+		
Total	7	585

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	3	269
65-69	3	111
70-74	3	1,029
75-79	2	654
80-84		
85-89	1	40
90-94	1	18
95-99		
100+		
Total	13	430

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Sheridan/2219
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Sheridan/2219

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Sheridan/2219

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Sheridan -- #2219

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Sheridan to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Sheridan.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Sheridan

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.91%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.52%)	(2.52%)	(2.52%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**10.99%**	**5.44%**	**9.54%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.55%**	**5.92%**	**10.02%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 93%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	7.39%	7.39%
Minimum July 1, 2015 Rate	4.39%	1.39%
Maximum July 1, 2015 Rate	10.39%	13.39%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$4,184,789	$3,276,399	($908,390)	128%	$796,271	(114%)
12/31/2008	3,227,801	3,325,532	97,731	97%	841,486	12%
12/31/2009	3,658,243	3,597,257	(60,986)	102%	872,695	(7%)
12/31/2010	3,537,952	3,788,496	250,544	93%	695,529	36%
12/31/2011	3,351,410	3,904,549	553,139	86%	843,575	66%
12/31/2012	3,729,854	3,992,295	262,441	93%	923,697	28%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Sheridan

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$262,441	$553,139
Allocated pooled OPSRP UAL	65,105	14,393
Side account	0	0
Net unfunded pension actuarial accrued liability	327,546	567,532
Combined valuation payroll	923,697	843,575
Net pension UAL as a percentage of payroll	35%	67%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$19,380	$21,853

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$71,254	$54,272
Tier 1/Tier 2 valuation payroll	552,131	535,086
Tier 1/Tier 2 pension normal cost rate	12.91%	10.14%
Tier 1/ Tier 2 Actuarial accrued liability	$3,992,295	$3,904,549
Actuarial asset value	3,729,854	3,351,410
Tier 1/Tier 2 Unfunded actuarial accrued liability	262,441	553,139
Tier 1/ Tier 2 Funded status	93%	86%
Combined valuation payroll	$923,697	$843,575
Tier 1/Tier 2 UAL as a percentage of payroll	28%	66%
Tier 1/Tier 2 UAL rate	(2.52%)	0.25%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	9	9
Tier 1/Tier 2 dormant members	2	3
Tier 1/Tier 2 retirees and beneficiaries	26	24

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	923,697	843,575
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$469,503	$411,261
2. Employer reserves	1,833,173	1,577,955
3. Benefits in force reserve	1,427,178	1,362,194
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,729,854**	**$3,351,410**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$3,351,410
2.	Regular employer contributions	36,730
3.	Benefit payments and expenses	(224,148)
4.	Adjustments[2]	114,780
5.	Interest credited	451,083
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,729,854**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	33,836	17,625
Tier 2 Police & Fire	0	0
Tier 2 General Service	37,418	36,647
Total	**$71,254**	**$54,272**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$58,314	$71,254	$12,940

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	980,890	965,626
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	582,658	431,742
▪ **Total Active Members**	**$1,563,548**	**$1,397,368**
Dormant Members	23,756	29,710
Retired Members and Beneficiaries	2,404,991	2,477,471
Total Actuarial Accrued Liability	**$3,992,295**	**$3,904,549**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$4,088,568	$3,992,295	($96,273)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,992,295	$3,904,549
2. Actuarial value of assets	3,729,854	3,351,410
3. Unfunded accrued liability *(1. – 2.)*	262,441	553,139
4. Funded percentage *(2. ÷ 1.)*	93%	86%
5. Combined valuation payroll	$923,697	$843,575
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	28%	66%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$262,441	$18,995
Total				**$262,441**	**$18,995**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$3,904,549
b. Normal cost at December 31, 2011	54,272
c. Benefit payments during 2012	(222,394)
d. Interest at 8.0% to December 31, 2012	307,810
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	4,044,237
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(96,273)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,947,964
2. Actuarial accrued liability at December 31, 2012	3,992,295
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(44,331)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	3,351,410
b. Contributions for 2012[1]	36,730
c. Benefit payments and expenses during 2012	(224,148)
d. Interest at 8.0% to December 31, 2012	260,616
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,424,607
5. Actuarial value of assets at December 31, 2012	3,729,854
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	305,247
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$260,916**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$553,139**
2. Expected increase	66,491
3. Liability (gain)/loss	44,331
4. Asset (gain)/loss	(305,247)
5. Change due to changes in assumptions, methods, and plan provisions	(96,273)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$262,441**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	33,836	195,308	17.32%	17,625	189,619	9.29%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	37,418	356,823	10.49%	36,647	345,467	10.61%
Total	**$71,254**	**$552,131**	**12.91%**	**$54,272**	**$535,086**	**10.14%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$262,441	$553,139
2. Next year's Tier 1/Tier 2 UAL payment	18,995	33,956
3. Combined valuation payroll	923,697	843,575
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.06%	4.03%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.91%	10.14%
b. Tier 1/Tier 2 UAL rate	2.06%	4.03%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.10%	14.30%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	7.39%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	7.39%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.48%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	93%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	4.39%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	10.39%
7. July 1, 2015 total pension rate, before adjustment	15.10%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.71%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.06%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.65%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	10.39%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.91%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.91%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.39%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.91%	10.14%
b. Tier 1/Tier 2 UAL rate	(2.65%)	0.12%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.39%	10.39%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$195,308	$0	$195,308
Tier 2	356,823	0	356,823
Tier 1/Tier 2 valuation payroll	552,131	0	552,131
OPSRP valuation payroll	371,566	0	371,566
Combined valuation payroll	**$923,697**	**$0**	**$923,697**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	3	6	9	18	3	6	8	17
Police & Fire	0	0	0	0	0	0	0	0
Total	3	6	9	18	3	6	8	17
Active Members with previous service segments with the employer								
General Service	2	0	N/A	2	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	2	0	N/A	2	1	0	N/A	1
Dormant Members								
General Service	1	1	0	2	2	1	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	0	2	2	1	0	3
Retired Members and Beneficiaries								
General Service	15	2	0	17	14	2	0	16
Police & Fire	9	0	0	9	8	0	0	8
Total	24	2	0	26	22	2	0	24
Grand Total Number of Members	**30**	**9**	**9**	**48**	**28**	**9**	**8**	**45**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							**1**
35-39			1							**1**
40-44										
45-49			1							**1**
50-54			2							**2**
55-59				1			1			**2**
60-64				2						**2**
65-69										
70-74										
75+										
Total	**0**	**0**	**5**	**3**	**0**	**0**	**1**	**0**	**0**	**9**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69	1	179
70-74		
75+	1	22
Total	2	101

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	1	614
45-49		
50-54		
55-59	2	52
60-64	4	1,373
65-69	5	866
70-74	6	729
75-79	2	199
80-84	1	680
85-89	3	1,036
90-94	2	174
95-99		
100+		
Total	26	748

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Salem/2101
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Salem/2101

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Salem/2101

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Salem -- #2101

Secondary Employers

2136	Salem Department Of Utilities
2661	Lincoln County 911
2748	Salem Area Mass Transit Authority

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Salem to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Salem.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Salem

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.36%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	9.14%	9.14%	9.14%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	(6.18%)	(6.18%)	(6.18%)
Net pension contribution rate	**17.92%**	**10.92%**	**15.02%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.48%**	**11.40%**	**15.50%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 80%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	19.58%	19.58%
Minimum July 1, 2015 Rate	15.66%	11.74%
Maximum July 1, 2015 Rate	23.50%	27.42%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$445,649,690	$390,865,770	($54,783,920)	114%	$70,866,049	(77%)
12/31/2008	332,415,600	404,323,293	71,907,693	82%	74,259,963	97%
12/31/2009	374,130,052	429,509,843	55,379,791	87%	74,520,439	74%
12/31/2010	395,595,667	449,744,424	54,148,757	88%	76,156,229	71%
12/31/2011	385,499,542	465,044,196	79,544,654	83%	77,274,971	103%
12/31/2012	426,847,155	469,350,980	42,503,825	91%	77,123,538	55%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Salem

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$96,204,271	$130,391,684
Allocated pooled OPSRP UAL	5,435,879	1,318,494
Side account	53,700,446	50,847,030
Net unfunded pension actuarial accrued liability	47,939,704	80,863,148
Combined valuation payroll	77,123,538	77,274,971
Net pension UAL as a percentage of payroll	62%	105%
Calculated side account rate relief	(6.18%)	(5.66%)
Allocated pooled RHIA UAL	$1,618,085	$2,001,847

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$7,562,929	$5,754,135
Tier 1/Tier 2 valuation payroll	52,680,079	54,522,312
Tier 1/Tier 2 pension normal cost rate	14.36%	10.55%
Tier 1/ Tier 2 Actuarial accrued liability	$469,350,980	$465,044,196
Actuarial asset value	373,146,709	334,652,512
Tier 1/Tier 2 Unfunded actuarial accrued liability	96,204,271	130,391,684
Tier 1/ Tier 2 Funded status	80%	72%
Combined valuation payroll	$77,123,538	$77,274,971
Tier 1/Tier 2 UAL as a percentage of payroll	125%	169%
Tier 1/Tier 2 UAL rate	9.14%	13.43%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	724	775
Tier 1/Tier 2 dormant members	280	283
Tier 1/Tier 2 retirees and beneficiaries	978	928

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**	**$50,847,030**	**$50,847,030**
2. Deposits made during 2012		N/A	
3. Administrative expenses		(2,000)	(2,000)
4. Amount transferred to employer reserves during 2012		(4,306,071)	(4,306,071)
5. Side account earnings during 2012		7,161,488	7,161,488
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***		**$53,700,446**	**$53,700,446**

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$50,261,544	$47,593,434
Side account 2	3,438,902	3,253,596
Side account 3	0	0
Total	**$53,700,446**	**$50,847,030**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$53,700,446	$50,847,030
2. Combined valuation payroll	77,123,538	77,274,971
3. Amortization factor	11.272	11.626
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	(6.18%)	(5.66%)

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$60,029,750	$57,883,252
2. Employer reserves	151,804,319	128,539,746
3. Benefits in force reserve	161,312,641	148,229,514
4. Total market value of assets ***(1. + 2. + 3.)***	**$373,146,709**	**$334,652,512**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$334,652,512
2. Regular employer contributions	7,005,480
3. Benefit payments and expenses	(25,335,294)
4. Adjustments[2]	7,181,007
5. Interest credited	45,336,933
6. Total transferred from side accounts	4,306,071
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$373,146,709**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$1,990,100	$1,786,534
Tier 1 General Service	2,189,794	763,934
Tier 2 Police & Fire	1,603,510	1,479,847
Tier 2 General Service	1,779,525	1,723,820
Total	**$7,562,929**	**$5,754,135**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$5,889,933	$7,562,929	$1,672,996

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$55,289,183	$63,803,311
▪ Tier 1 General Service	63,141,402	71,033,097
▪ Tier 2 Police & Fire	22,043,455	15,752,104
▪ Tier 2 General Service	30,696,339	22,198,713
▪ **Total Active Members**	**$171,170,379**	**$172,787,225**
Dormant Members	26,346,526	22,666,598
Retired Members and Beneficiaries	271,834,075	269,590,373
Total Actuarial Accrued Liability	**$469,350,980**	**$465,044,196**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$488,242,901	$469,350,980	($18,891,921)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$469,350,980	$465,044,196
2. Actuarial value of assets	373,146,709	334,652,512
3. Unfunded accrued liability *(1. – 2.)*	96,204,271	130,391,684
4. Funded percentage *(2. ÷ 1.)*	80%	72%
5. Combined valuation payroll	$77,123,538	$77,274,971
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	125%	169%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$96,204,271	$6,963,251
Total				**$96,204,271**	**$6,963,251**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$465,044,196
b. Normal cost at December 31, 2011	5,754,135
c. Benefit payments during 2012	(25,136,971)
d. Interest at 8.0% to December 31, 2012	36,658,388
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	482,319,748
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(18,891,921)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	463,427,827
2. Actuarial accrued liability at December 31, 2012	469,350,980
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(5,923,153)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	334,652,512
b. Contributions for 2012[1]	11,311,551
c. Benefit payments and expenses during 2012	(25,335,294)
d. Interest at 8.0% to December 31, 2012	26,211,251
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	346,840,021
5. Actuarial value of assets at December 31, 2012	373,146,709
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	26,306,689
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$20,383,536**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$130,391,684**
2. Expected increase	5,088,044
3. Liability (gain)/loss	5,923,153
4. Asset (gain)/loss	(26,306,689)
5. Change due to changes in assumptions, methods, and plan provisions	(18,891,921)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$96,204,271**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$1,990,100	$10,761,610	18.49%	$1,786,534	$12,068,505	14.80%
Tier 1 General Service	2,189,794	14,770,924	14.83%	763,934	15,275,771	5.00%
Tier 2 Police & Fire	1,603,510	10,677,766	15.02%	1,479,847	10,516,465	14.07%
Tier 2 General Service	1,779,525	16,469,779	10.80%	1,723,820	16,661,571	10.35%
Total	**$7,562,929**	**$52,680,079**	**14.36%**	**$5,754,135**	**$54,522,312**	**10.55%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$96,204,271	$130,391,684
2. Next year's Tier 1/Tier 2 UAL payment	6,963,251	10,273,741
3. Combined valuation payroll	77,123,538	77,274,971
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	9.03%	13.30%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.36%	10.55%
b. Tier 1/Tier 2 UAL rate	9.03%	13.30%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	23.52%	23.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.92%
2. Employer contribution rate attributable to side accounts	(5.66%)
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	19.58%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.92%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.92%
c. Funded percentage	80%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.92%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	15.66%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	23.50%
7. July 1, 2015 total pension rate, before adjustment	23.52%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.02%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	9.03%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	9.01%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	23.50%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.36%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.36%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	23.50%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.36%	10.55%
b. Tier 1/Tier 2 UAL rate	9.01%	13.30%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	23.50%	23.98%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$14,770,924	$10,761,610	$25,532,534
Tier 2	16,469,779	10,677,766	27,147,545
Tier 1/Tier 2 valuation payroll	31,240,703	21,439,376	52,680,079
OPSRP valuation payroll	17,168,541	7,274,918	24,443,459
Combined valuation payroll	**$48,409,244**	**$28,714,294**	**$77,123,538**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	222	268	336	826	247	279	323	849
Police & Fire	115	119	91	325	129	120	89	338
Total	337	387	427	1,151	376	399	412	1,187
Active Members with previous service segments with the employer								
General Service	121	118	N/A	239	168	147	N/A	315
Police & Fire	39	15	N/A	54	44	18	N/A	62
Total	160	133	N/A	293	212	165	N/A	377
Dormant Members								
General Service	137	113	28	278	142	111	17	270
Police & Fire	23	7	1	31	21	9	0	30
Total	160	120	29	309	163	120	17	300
Retired Members and Beneficiaries								
General Service	582	92	2	676	553	76	2	631
Police & Fire	284	20	0	304	282	17	0	299
Total	866	112	2	980	835	93	2	930
Grand Total Number of Members	**1,523**	**752**	**458**	**2,733**	**1,586**	**777**	**431**	**2,794**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29		1								**1**
30-34		8	9							**17**
35-39		23	54	9						**86**
40-44		8	67	52	7					**134**
45-49		7	52	35	23	5				**122**
50-54		13	42	19	41	11	5			**131**
55-59		11	25	26	33	21	6			**122**
60-64		2	23	20	29	7	5	1		**87**
65-69		3	8	2	5	3	1	1		**23**
70-74					1					**1**
75+										
Total	**0**	**76**	**280**	**163**	**139**	**47**	**17**	**2**	**0**	**724**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	6	563
35-39	24	496
40-44	43	1,149
45-49	42	1,018
50-54	47	1,280
55-59	64	1,138
60-64	31	746
65-69	13	1,251
70-74	6	182
75+	4	2,398
Total	280	1,038

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	8	1,521
45-49	5	3,229
50-54	16	2,107
55-59	93	2,991
60-64	220	2,376
65-69	247	2,069
70-74	173	1,962
75-79	98	1,607
80-84	56	1,239
85-89	49	849
90-94	9	318
95-99	4	129
100+		
Total	978	2,030

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Rainier/2297
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Rainier/2297

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Rainier/2297

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Rainier -- #2297

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Rainier to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Rainier.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Rainier

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.07%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.36%)	(3.36%)	(3.36%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.31%**	**4.60%**	**8.70%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.87%**	**5.08%**	**9.18%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 95%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$4,967,287	$3,742,765	($1,224,522)	133%	$820,101	(149%)
12/31/2008	3,730,296	3,999,452	269,156	93%	876,422	31%
12/31/2009	3,420,137	3,646,822	226,685	94%	1,021,880	22%
12/31/2010	3,747,957	4,261,276	513,319	88%	1,009,433	51%
12/31/2011	3,641,708	4,207,024	565,316	87%	1,076,703	53%
12/31/2012	3,755,949	3,944,269	188,320	95%	950,115	20%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Rainier

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$188,320	$565,316
Allocated pooled OPSRP UAL	66,967	18,371
Side account	0	0
Net unfunded pension actuarial accrued liability	255,287	583,687
Combined valuation payroll	950,115	1,076,703
Net pension UAL as a percentage of payroll	27%	54%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$19,934	$27,893

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$78,241	$71,448
Tier 1/Tier 2 valuation payroll	519,230	595,397
Tier 1/Tier 2 pension normal cost rate	15.07%	12.00%
Tier 1/ Tier 2 Actuarial accrued liability	$3,944,269	$4,207,024
Actuarial asset value	3,755,949	3,641,708
Tier 1/Tier 2 Unfunded actuarial accrued liability	188,320	565,316
Tier 1/ Tier 2 Funded status	95%	87%
Combined valuation payroll	$950,115	$1,076,703
Tier 1/Tier 2 UAL as a percentage of payroll	20%	53%
Tier 1/Tier 2 UAL rate	(3.36%)	(0.29%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	9	9
Tier 1/Tier 2 dormant members	5	5
Tier 1/Tier 2 retirees and beneficiaries	12	11

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	950,115	1,076,703
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$503,225	$521,665
2. Employer reserves	1,934,646	1,845,531
3. Benefits in force reserve	1,318,078	1,274,513
4. Total market value of assets *(1. + 2. + 3.)*	**$3,755,949**	**$3,641,708**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$3,641,708
2. Regular employer contributions	25,046
3. Benefit payments and expenses	(207,014)
4. Adjustments[2]	(177,294)
5. Interest credited	473,503
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$3,755,949**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$8,735	$9,229
Tier 1 General Service	21,938	14,052
Tier 2 Police & Fire	35,010	34,391
Tier 2 General Service	12,558	13,776
Total	**$78,241**	**$71,448**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$68,766	$78,241	$9,475

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$351,748	$701,864
▪ Tier 1 General Service	425,773	438,745
▪ Tier 2 Police & Fire	544,122	390,646
▪ Tier 2 General Service	206,099	217,082
▪ **Total Active Members**	**$1,527,742**	**$1,748,337**
Dormant Members	195,383	140,685
Retired Members and Beneficiaries	2,221,144	2,318,002
Total Actuarial Accrued Liability	**$3,944,269**	**$4,207,024**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$4,018,192	$3,944,269	($73,923)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,944,269	$4,207,024
2. Actuarial value of assets	3,755,949	3,641,708
3. Unfunded accrued liability *(1. – 2.)*	188,320	565,316
4. Funded percentage *(2. ÷ 1.)*	95%	87%
5. Combined valuation payroll	$950,115	$1,076,703
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	20%	53%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$188,320	$13,631
Total				**$188,320**	**$13,631**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$4,207,024
b. Normal cost at December 31, 2011	71,448
c. Benefit payments during 2012	(205,393)
d. Interest at 8.0% to December 31, 2012	334,062
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	4,407,141
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(73,923)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	4,333,218
2. Actuarial accrued liability at December 31, 2012	3,944,269
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	388,949
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	3,641,708
b. Contributions for 2012[1]	25,046
c. Benefit payments and expenses during 2012	(207,014)
d. Interest at 8.0% to December 31, 2012	284,058
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,743,798
5. Actuarial value of assets at December 31, 2012	3,755,949
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	12,151
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$401,100**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$565,316**
2. Expected increase	98,027
3. Liability (gain)/loss	(388,949)
4. Asset (gain)/loss	(12,151)
5. Change due to changes in assumptions, methods, and plan provisions	(73,923)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$188,320**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$8,735	$47,427	18.42%	$9,229	$47,938	19.25%
Tier 1 General Service	21,938	134,009	16.37%	14,052	196,551	7.15%
Tier 2 Police & Fire	35,010	229,120	15.28%	34,391	232,405	14.80%
Tier 2 General Service	12,558	108,674	11.56%	13,776	118,503	11.63%
Total	**$78,241**	**$519,230**	**15.07%**	**$71,448**	**$595,397**	**12.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$188,320	$565,316
2. Next year's Tier 1/Tier 2 UAL payment	13,631	33,905
3. Combined valuation payroll	950,115	1,076,703
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.43%	3.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.07%	12.00%
b. Tier 1/Tier 2 UAL rate	1.43%	3.15%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.63%	15.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	95%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	16.63%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.92%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.43%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.49%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.71%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.07%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.07%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.07%	12.00%
b. Tier 1/Tier 2 UAL rate	(3.49%)	(0.42%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.71%	11.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$134,009	$47,427	$181,436
Tier 2	108,674	229,120	337,794
Tier 1/Tier 2 valuation payroll	242,683	276,547	519,230
OPSRP valuation payroll	286,692	144,193	430,885
Combined valuation payroll	**$529,375**	**$420,740**	**$950,115**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	3	2	6	11	3	2	6	11
Police & Fire	1	3	2	6	1	3	2	6
Total	4	5	8	17	4	5	8	17
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	1	N/A	2
Police & Fire	1	1	N/A	2	4	1	N/A	5
Total	2	1	N/A	3	5	2	N/A	7
Dormant Members								
General Service	1	1	0	2	2	1	0	3
Police & Fire	1	2	0	3	0	2	0	2
Total	2	3	0	5	2	3	0	5
Retired Members and Beneficiaries								
General Service	7	0	0	7	6	0	0	6
Police & Fire	5	0	0	5	5	0	0	5
Total	12	0	0	12	11	0	0	11
Grand Total Number of Members	**20**	**9**	**8**	**37**	**22**	**10**	**8**	**40**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39			1							**1**
40-44			3							**3**
45-49										
50-54				1						**1**
55-59				2						**2**
60-64					2					**2**
65-69										
70-74										
75+										
Total	**0**	**0**	**4**	**3**	**2**	**0**	**0**	**0**	**0**	**9**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	1,044
40-44	1	797
45-49	2	565
50-54		
55-59	1	3,271
60-64		
65-69		
70-74		
75+		
Total	5	1,248

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	2	1,976
55-59		
60-64	2	1,895
65-69	4	1,059
70-74	2	979
75-79	1	332
80-84	1	1,532
85-89		
90-94		
95-99		
100+		
Total	12	1,317

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Prineville/2146
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Prineville/2146

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Prineville/2146

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Prineville -- #2146

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Prineville to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Prineville.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Prineville

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.90%)	(0.90%)	(0.90%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.03%**	**7.06%**	**11.16%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.59%**	**7.54%**	**11.64%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 87%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.43%	10.43%
Minimum July 1, 2015 Rate	7.43%	4.43%
Maximum July 1, 2015 Rate	13.43%	16.43%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$15,921,543	$14,497,823	($1,423,720)	110%	$3,259,984	(44%)
12/31/2008	11,841,127	14,892,263	3,051,136	80%	3,483,751	88%
12/31/2009	13,028,663	15,500,618	2,471,955	84%	3,287,676	75%
12/31/2010	14,080,970	16,407,260	2,326,290	86%	3,605,853	65%
12/31/2011	13,842,964	17,171,719	3,328,755	81%	3,614,154	92%
12/31/2012	15,017,643	17,271,790	2,254,147	87%	3,682,268	61%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Prineville

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$2,254,147	$3,328,755
Allocated pooled OPSRP UAL	259,536	61,666
Side account	0	0
Net unfunded pension actuarial accrued liability	2,513,683	3,390,421
Combined valuation payroll	3,682,268	3,614,154
Net pension UAL as a percentage of payroll	68%	94%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$77,256	$93,626

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$259,614	$232,795
Tier 1/Tier 2 valuation payroll	1,812,084	1,938,533
Tier 1/Tier 2 pension normal cost rate	14.33%	12.01%
Tier 1/ Tier 2 Actuarial accrued liability	$17,271,790	$17,171,719
Actuarial asset value	15,017,643	13,842,964
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,254,147	3,328,755
Tier 1/ Tier 2 Funded status	87%	81%
Combined valuation payroll	$3,682,268	$3,614,154
Tier 1/Tier 2 UAL as a percentage of payroll	61%	92%
Tier 1/Tier 2 UAL rate	(0.90%)	1.42%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	29	32
Tier 1/Tier 2 dormant members	23	23
Tier 1/Tier 2 retirees and beneficiaries	53	49

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	3,682,268	3,614,154
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,857,871	$2,714,161
2. Employer reserves	7,189,704	6,468,217
3. Benefits in force reserve	4,970,068	4,660,586
4. Total market value of assets ***(1. + 2. + 3.)***	**$15,017,643**	**$13,842,964**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$13,842,964
2.	Regular employer contributions	196,686
3.	Benefit payments and expenses	(780,584)
4.	Adjustments [2]	(25,644)
5.	Interest credited	1,784,221
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$15,017,643**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$58,957	$68,512
Tier 1 General Service	89,983	47,728
Tier 2 Police & Fire	43,833	52,891
Tier 2 General Service	66,841	63,664
Total	**$259,614**	**$232,795**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$227,415	$259,614	$32,199

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$3,322,050	$3,258,192
▪ Tier 1 General Service	2,709,465	3,151,389
▪ Tier 2 Police & Fire	1,190,934	1,037,120
▪ Tier 2 General Service	1,071,974	688,528
▪ **Total Active Members**	**$8,294,423**	**$8,135,229**
Dormant Members	602,116	560,113
Retired Members and Beneficiaries	8,375,251	8,476,377
Total Actuarial Accrued Liability	**$17,271,790**	**$17,171,719**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$17,757,848	$17,271,790	($486,058)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$17,271,790	$17,171,719
2. Actuarial value of assets	15,017,643	13,842,964
3. Unfunded accrued liability *(1. – 2.)*	2,254,147	3,328,755
4. Funded percentage *(2. ÷ 1.)*	87%	81%
5. Combined valuation payroll	$3,682,268	$3,614,154
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	61%	92%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$2,254,147	$163,155
Total				**$2,254,147**	**$163,155**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$17,171,719
b. Normal cost at December 31, 2011	232,795
c. Benefit payments during 2012	(774,474)
d. Interest at 8.0% to December 31, 2012	1,361,382
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	17,991,422
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(486,058)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	17,505,364
2. Actuarial accrued liability at December 31, 2012	17,271,790
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	233,574
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	13,842,964
b. Contributions for 2012[1]	196,686
c. Benefit payments and expenses during 2012	(780,584)
d. Interest at 8.0% to December 31, 2012	1,084,081
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	14,343,147
5. Actuarial value of assets at December 31, 2012	15,017,643
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	674,496
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$908,070**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$3,328,755**
2. Expected increase	319,520
3. Liability (gain)/loss	(233,574)
4. Asset (gain)/loss	(674,496)
5. Change due to changes in assumptions, methods, and plan provisions	(486,058)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$2,254,147**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$58,957	$318,340	18.52%	$68,512	$312,460	21.93%
Tier 1 General Service	89,983	577,641	15.58%	47,728	684,902	6.97%
Tier 2 Police & Fire	43,833	246,199	17.80%	52,891	302,909	17.46%
Tier 2 General Service	66,841	669,904	9.98%	63,664	638,262	9.97%
Total	**$259,614**	**$1,812,084**	**14.33%**	**$232,795**	**$1,938,533**	**12.01%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$2,254,147	$3,328,755
2. Next year's Tier 1/Tier 2 UAL payment	163,155	248,090
3. Combined valuation payroll	3,682,268	3,614,154
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.43%	6.86%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	12.01%
b. Tier 1/Tier 2 UAL rate	4.43%	6.86%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.89%	19.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.43%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.43%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.09%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	87%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.43%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.43%
7. July 1, 2015 total pension rate, before adjustment	18.89%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.46%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.43%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.03%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.43%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.33%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.33%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.43%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	12.01%
b. Tier 1/Tier 2 UAL rate	(1.03%)	1.29%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.43%	13.43%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$577,641	$318,340	$895,981
Tier 2	669,904	246,199	916,103
Tier 1/Tier 2 valuation payroll	1,247,545	564,539	1,812,084
OPSRP valuation payroll	1,273,699	596,485	1,870,184
Combined valuation payroll	**$2,521,244**	**$1,161,024**	**$3,682,268**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	10	12	29	51	12	12	27	51
Police & Fire	4	3	9	16	4	4	9	17
Total	14	15	38	67	16	16	36	68
Active Members with previous service segments with the employer								
General Service	4	3	N/A	7	6	5	N/A	11
Police & Fire	3	6	N/A	9	12	10	N/A	22
Total	7	9	N/A	16	18	15	N/A	33
Dormant Members								
General Service	2	15	6	23	5	13	7	25
Police & Fire	0	6	0	6	0	5	0	5
Total	2	21	6	29	5	18	7	30
Retired Members and Beneficiaries								
General Service	30	1	0	31	26	1	0	27
Police & Fire	21	1	0	22	21	1	0	22
Total	51	2	0	53	47	2	0	49
Grand Total Number of Members	**74**	**47**	**44**	**165**	**86**	**51**	**43**	**180**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29		1								**1**
30-34										
35-39		1	1	1						**3**
40-44			1							**1**
45-49		1	3		2	2				**8**
50-54		1	2	3	2					**8**
55-59			1	1	1	1				**4**
60-64		2					1			**3**
65-69						1				**1**
70-74										
75+										
Total	**0**	**6**	**8**	**5**	**5**	**4**	**1**	**0**	**0**	**29**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	672
35-39	7	259
40-44	1	12
45-49	3	534
50-54	2	380
55-59	4	382
60-64	2	202
65-69	2	58
70-74	1	7,119
75+		
Total	23	610

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	2	523
55-59	6	1,437
60-64	16	1,191
65-69	11	1,671
70-74	8	767
75-79	4	570
80-84	4	1,157
85-89	1	162
90-94	1	536
95-99		
100+		
Total	53	1,148

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Prairie City/2218
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Prairie City/2218

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Prairie City/2218

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Prairie City -- #2218

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Prairie City to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Prairie City.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Prairie City

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.25%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(1.99%)	(1.99%)	(1.99%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.86%**	**5.97%**	**10.07%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**10.42%**	**6.45%**	**10.55%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 103%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,659,595	$1,314,834	($344,761)	126%	$204,684	(168%)
12/31/2008	1,244,294	1,465,673	221,379	85%	136,832	162%
12/31/2009	1,431,201	1,545,579	114,378	93%	178,976	64%
12/31/2010	1,316,020	1,342,502	26,482	98%	186,224	14%
12/31/2011	1,335,696	1,442,081	106,385	93%	186,382	57%
12/31/2012	1,502,438	1,452,831	(49,607)	103%	169,129	(29%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Prairie City

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($49,607)	$106,385
Allocated pooled OPSRP UAL	11,921	3,180
Side account	0	0
Net unfunded pension actuarial accrued liability	(37,686)	109,565
Combined valuation payroll	169,129	186,382
Net pension UAL as a percentage of payroll	(22%)	59%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,548	$4,828

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$19,025	$17,068
Tier 1/Tier 2 valuation payroll	169,129	186,382
Tier 1/Tier 2 pension normal cost rate	11.25%	9.16%
Tier 1/ Tier 2 Actuarial accrued liability	$1,452,831	$1,442,081
Actuarial asset value	1,502,438	1,335,696
Tier 1/Tier 2 Unfunded actuarial accrued liability	(49,607)	106,385
Tier 1/ Tier 2 Funded status	103%	93%
Combined valuation payroll	$169,129	$186,382
Tier 1/Tier 2 UAL as a percentage of payroll	(29%)	57%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(1.99%)	2.55%
Tier 1/Tier 2 active members [1]	5	5
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	7	8

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	169,129	186,382
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$384,593	$337,464
2. Employer reserves	927,630	797,333
3. Benefits in force reserve	190,215	200,900
4. Total market value of assets *(1. + 2. + 3.)*	**$1,502,438**	**$1,335,696**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$1,335,696
2.	Regular employer contributions	13,959
3.	Benefit payments and expenses	(29,875)
4.	Adjustments [2]	11,739
5.	Interest credited	170,919
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,502,438**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	9,963	6,562
Tier 2 Police & Fire	0	0
Tier 2 General Service	9,062	10,506
Total	**$19,025**	**$17,068**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$18,538	$19,025	$487

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	302,226	280,460
▪ Tier 2 Police & Fire	114,266	96,483
▪ Tier 2 General Service	121,472	104,331
▪ **Total Active Members**	**$537,964**	**$481,274**
Dormant Members	594,329	595,424
Retired Members and Beneficiaries	320,538	365,383
Total Actuarial Accrued Liability	**$1,452,831**	**$1,442,081**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,497,597	$1,452,831	($44,766)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,452,831	$1,442,081
2. Actuarial value of assets	1,502,438	1,335,696
3. Unfunded accrued liability *(1. – 2.)*	(49,607)	106,385
4. Funded percentage *(2. ÷ 1.)*	103%	93%
5. Combined valuation payroll	$169,129	$186,382
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(29%)	57%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($49,607)	($3,591)
Total				**($49,607)**	**($3,591)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,442,081
b. Normal cost at December 31, 2011	17,068
c. Benefit payments during 2012	(29,641)
d. Interest at 8.0% to December 31, 2012	115,546
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,545,054
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(44,766)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,500,288
2. Actuarial accrued liability at December 31, 2012	1,452,831
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	47,457
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,335,696
b. Contributions for 2012[1]	13,959
c. Benefit payments and expenses during 2012	(29,875)
d. Interest at 8.0% to December 31, 2012	106,219
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,426,000
5. Actuarial value of assets at December 31, 2012	1,502,438
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	76,438
7. Total actuarial gain/(loss) *(3. + 6.)*	**$123,895**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$106,385**
2. Expected increase	12,669
3. Liability (gain)/loss	(47,457)
4. Asset (gain)/loss	(76,438)
5. Change due to changes in assumptions, methods, and plan provisions	(44,766)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**($49,607)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	9,963	74,813	13.32%	6,562	77,064	8.52%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	9,062	94,316	9.61%	10,506	109,318	9.61%
Total	**$19,025**	**$169,129**	**11.25%**	**$17,068**	**$186,382**	**9.16%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($49,607)	$106,385
2. Next year's Tier 1/Tier 2 UAL payment	(3,591)	5,863
3. Combined valuation payroll	169,129	186,382
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.12%)	3.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.25%	9.16%
b. Tier 1/Tier 2 UAL rate	(2.12%)	3.15%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	9.26%	12.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	103%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	9.26%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.12%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.12%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	9.26%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.25%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.25%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	9.26%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.25%	9.16%
b. Tier 1/Tier 2 UAL rate	(2.12%)	2.42%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	9.26%	11.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$74,813	$0	$74,813
Tier 2	94,316	0	94,316
Tier 1/Tier 2 valuation payroll	169,129	0	169,129
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$169,129**	**$0**	**$169,129**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	3	0	5	2	3	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	2	3	0	5	2	3	0	5
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	1	N/A	1	0	2	N/A	2
Total	0	1	N/A	1	0	2	N/A	2
Dormant Members								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Retired Members and Beneficiaries								
General Service	3	0	0	3	4	0	0	4
Police & Fire	3	1	0	4	3	1	0	4
Total	6	1	0	7	7	1	0	8
Grand Total Number of Members	**9**	**5**	**0**	**14**	**10**	**6**	**0**	**16**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39		1								**1**
40-44			1							**1**
45-49										
50-54										
55-59				1						**1**
60-64					1	1				**2**
65-69										
70-74										
75+										
Total	**0**	**1**	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**5**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	4,104
60-64		
65-69		
70-74		
75+		
Total	1	4,104

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	245
60-64	1	135
65-69	2	490
70-74	1	272
75-79	1	245
80-84		
85-89	1	439
90-94		
95-99		
100+		
Total	7	331

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Powers/2215
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
City of Powers/2215

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Powers/2215

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Powers -- #2215

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Powers to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Powers.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Powers

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.46%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(11.02%)	(11.02%)	(11.02%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**1.04%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**1.52%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 234%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	3.31%	3.31%
Minimum July 1, 2015 Rate	0.31%	0.00%
Maximum July 1, 2015 Rate	6.31%	9.31%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$81,826	$39,307	($42,519)	208%	$0	0%
12/31/2008	63,327	39,247	(24,080)	161%	38,835	(62%)
12/31/2009	87,332	38,915	(48,417)	224%	39,539	(122%)
12/31/2010	102,721	45,009	(57,712)	228%	40,511	(142%)
12/31/2011	106,075	52,769	(53,306)	201%	65,891	(81%)
12/31/2012	121,512	51,982	(69,530)	234%	45,124	(154%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Powers

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	($69,530)	($53,306)
Allocated pooled OPSRP UAL	3,180	1,124
Side account	0	0
Net unfunded pension actuarial accrued liability	(66,350)	(52,182)
Combined valuation payroll	45,124	65,891
Net pension UAL as a percentage of payroll	(147%)	(79%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$947	$1,707

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	16.46%	10.82%
Tier 1/ Tier 2 Actuarial accrued liability	$51,982	$52,769
Actuarial asset value	121,512	106,075
Tier 1/Tier 2 Unfunded actuarial accrued liability	(69,530)	(53,306)
Tier 1/ Tier 2 Funded status	234%	201%
Combined valuation payroll	$45,124	$65,891
Tier 1/Tier 2 UAL as a percentage of payroll	(154%)	(81%)
Tier 1/Tier 2 UAL rate	(11.02%)	(2.50%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	45,124	65,891
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,662	$2,340
2. Employer reserves	96,014	81,757
3. Benefits in force reserve	22,836	21,978
4. Total market value of assets ***(1. + 2. + 3.)***	**$121,512**	**$106,075**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$106,075
2. Regular employer contributions	2,244
3. Benefit payments and expenses	(3,586)
4. Adjustments [2]	1,625
5. Interest credited	15,155
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$121,512**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$6,645	$6,552
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$6,645**	**$6,552**
Dormant Members	6,856	6,246
Retired Members and Beneficiaries	38,481	39,971
Total Actuarial Accrued Liability	**$51,982**	**$52,769**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$53,098	$51,982	($1,116)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$51,982	$52,769
2. Actuarial value of assets	121,512	106,075
3. Unfunded accrued liability *(1. – 2.)*	(69,530)	(53,306)
4. Funded percentage *(2. ÷ 1.)*	234%	201%
5. Combined valuation payroll	$45,124	$65,891
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(154%)	(81%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($69,530)	($5,033)
Total				**($69,530)**	**($5,033)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$52,769
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	(3,558)
d. Interest at 8.0% to December 31, 2012	4,079
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	53,290
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,116)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	52,174
2. Actuarial accrued liability at December 31, 2012	51,982
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	192
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	106,075
b. Contributions for 2012[1]	2,244
c. Benefit payments and expenses during 2012	(3,586)
d. Interest at 8.0% to December 31, 2012	8,432
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	113,165
5. Actuarial value of assets at December 31, 2012	121,512
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	8,348
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$8,540**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($53,306)**
2. Expected increase	(6,568)
3. Liability (gain)/loss	(192)
4. Asset (gain)/loss	(8,348)
5. Change due to changes in assumptions, methods, and plan provisions	(1,116)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($69,530)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**14.33%**	**$0**	**$0**	**10.82%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($69,530)	($53,306)
2. Next year's Tier 1/Tier 2 UAL payment	(5,033)	(4,606)
3. Combined valuation payroll	45,124	65,891
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(11.15%)	(6.99%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	10.82%
b. Tier 1/Tier 2 UAL rate	(11.15%)	(6.99%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	3.31%	3.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	3.31%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	3.31%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.46%	10.82%
b. Tier 1/Tier 2 UAL rate	(11.15%)	(2.63%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	8.32%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	0	45,124	45,124
Combined valuation payroll	**$0**	**$45,124**	**$45,124**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	1	1	0	0	2	2
Total	0	0	1	1	0	0	2	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	0	N/A	1	1	0	N/A	1
Total	1	0	N/A	1	1	0	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	0	1	0	1
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	4	0	0	4	4	0	0	4
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**6**	**1**	**1**	**8**	**6**	**1**	**2**	**9**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74	1	64
75+		
Total	1	64

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	3	54
65-69		
70-74	1	74
75-79		
80-84		
85-89	1	92
90-94		
95-99		
100+		
Total	5	65

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Ontario/2118
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Ontario/2118

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Ontario/2118

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Ontario -- #2118

Secondary Employers

2762 Ontario Rural Fire Protection District

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Ontario to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Ontario.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Ontario

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.82%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	6.73%	6.73%	6.73%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**22.15%**	**14.69%**	**18.79%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**22.71%**	**15.17%**	**19.27%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 84%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	17.96%	17.96%
Minimum July 1, 2015 Rate	14.37%	10.78%
Maximum July 1, 2015 Rate	21.55%	25.14%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$30,694,923	$31,568,278	$873,355	97%	$4,215,245	21%
12/31/2008	23,170,974	32,216,417	9,045,443	72%	4,399,612	206%
12/31/2009	25,814,910	33,286,524	7,471,614	78%	4,650,789	161%
12/31/2010	27,876,104	34,747,117	6,871,013	80%	4,869,659	141%
12/31/2011	27,279,942	36,378,159	9,098,217	75%	4,606,302	198%
12/31/2012	30,253,320	36,203,427	5,950,107	84%	4,494,055	132%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Ontario

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$5,950,107	$9,098,217
Allocated pooled OPSRP UAL	316,753	78,594
Side account	0	0
Net unfunded pension actuarial accrued liability	6,266,860	9,176,811
Combined valuation payroll	4,494,055	4,606,302
Net pension UAL as a percentage of payroll	139%	199%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$94,287	$119,329

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$460,083	$351,047
Tier 1/Tier 2 valuation payroll	3,105,423	3,242,300
Tier 1/Tier 2 pension normal cost rate	14.82%	10.83%
Tier 1/ Tier 2 Actuarial accrued liability	$36,203,427	$36,378,159
Actuarial asset value	30,253,320	27,279,942
Tier 1/Tier 2 Unfunded actuarial accrued liability	5,950,107	9,098,217
Tier 1/ Tier 2 Funded status	84%	75%
Combined valuation payroll	$4,494,055	$4,606,302
Tier 1/Tier 2 UAL as a percentage of payroll	132%	198%
Tier 1/Tier 2 UAL rate	6.73%	11.53%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	53	57
Tier 1/Tier 2 dormant members	39	37
Tier 1/Tier 2 retirees and beneficiaries	96	92

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	4,494,055	4,606,302
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$5,198,099	$4,668,532
2. Employer reserves	12,453,688	10,505,079
3. Benefits in force reserve	12,601,533	12,106,331
4. Total market value of assets ***(1. + 2. + 3.)***	**$30,253,320**	**$27,279,942**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$27,279,942
2. Regular employer contributions	646,248
3. Benefit payments and expenses	(1,979,160)
4. Adjustments [2]	697,509
5. Interest credited	3,608,781
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$30,253,320**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$172,791	$146,716
Tier 1 General Service	93,095	21,602
Tier 2 Police & Fire	106,786	103,077
Tier 2 General Service	87,411	79,652
Total	**$460,083**	**$351,047**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$377,190	$460,083	$82,893

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$5,861,599	$5,383,866
▪ Tier 1 General Service	3,248,003	4,491,491
▪ Tier 2 Police & Fire	1,314,116	1,026,449
▪ Tier 2 General Service	1,501,546	1,130,646
▪ **Total Active Members**	**$11,925,264**	**$12,032,452**
Dormant Members	3,042,840	2,327,485
Retired Members and Beneficiaries	21,235,323	22,018,222
Total Actuarial Accrued Liability	**$36,203,427**	**$36,378,159**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$37,864,720	$36,203,427	($1,661,293)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$36,203,427	$36,378,159
2. Actuarial value of assets	30,253,320	27,279,942
3. Unfunded accrued liability *(1. – 2.)*	5,950,107	9,098,217
4. Funded percentage *(2. ÷ 1.)*	84%	75%
5. Combined valuation payroll	$4,494,055	$4,606,302
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	132%	198%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$5,950,107	$430,668
Total				**$5,950,107**	**$430,668**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$36,378,159
b. Normal cost at December 31, 2011	351,047
c. Benefit payments during 2012	(1,963,667)
d. Interest at 8.0% to December 31, 2012	2,859,790
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	37,625,329
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,661,293)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	35,964,036
2. Actuarial accrued liability at December 31, 2012	36,203,427
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(239,391)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	27,279,942
b. Contributions for 2012[1]	646,248
c. Benefit payments and expenses during 2012	(1,979,160)
d. Interest at 8.0% to December 31, 2012	2,129,079
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	28,076,108
5. Actuarial value of assets at December 31, 2012	30,253,320
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	2,177,211
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$1,937,820**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$9,098,217**
2. Expected increase	451,003
3. Liability (gain)/loss	239,391
4. Asset (gain)/loss	(2,177,211)
5. Change due to changes in assumptions, methods, and plan provisions	(1,661,293)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$5,950,107**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$172,791	$1,020,616	16.93%	$146,716	$971,782	15.10%
Tier 1 General Service	93,095	564,521	16.49%	21,602	699,510	3.09%
Tier 2 Police & Fire	106,786	697,816	15.30%	103,077	716,312	14.39%
Tier 2 General Service	87,411	822,470	10.63%	79,652	854,696	9.32%
Total	**$460,083**	**$3,105,423**	**14.82%**	**$351,047**	**$3,242,300**	**10.83%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$5,950,107	$9,098,217
2. Next year's Tier 1/Tier 2 UAL payment	430,668	713,389
3. Combined valuation payroll	4,494,055	4,606,302
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	9.58%	15.49%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.82%	10.83%
b. Tier 1/Tier 2 UAL rate	9.58%	15.49%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	24.53%	26.45%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	17.96%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	17.96%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.59%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.59%
c. Funded percentage	84%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.59%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	14.37%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	21.55%
7. July 1, 2015 total pension rate, before adjustment	24.53%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.98%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	9.58%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	6.60%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	21.55%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.82%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.82%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	21.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.82%	10.83%
b. Tier 1/Tier 2 UAL rate	6.60%	11.40%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	21.55%	22.36%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$564,521	$1,020,616	$1,585,137
Tier 2	822,470	697,816	1,520,286
Tier 1/Tier 2 valuation payroll	1,386,991	1,718,432	3,105,423
OPSRP valuation payroll	960,390	428,242	1,388,632
Combined valuation payroll	**$2,347,381**	**$2,146,674**	**$4,494,055**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	10	18	22	50	13	18	24	55
Police & Fire	14	11	8	33	14	12	8	34
Total	24	29	30	83	27	30	32	89
Active Members with previous service segments with the employer								
General Service	13	4	N/A	17	20	7	N/A	27
Police & Fire	7	0	N/A	7	13	6	N/A	19
Total	20	4	N/A	24	33	13	N/A	46
Dormant Members								
General Service	18	15	3	36	16	15	0	31
Police & Fire	3	3	1	7	3	3	1	7
Total	21	18	4	43	19	18	1	38
Retired Members and Beneficiaries								
General Service	63	6	1	70	61	5	0	66
Police & Fire	26	1	0	27	26	0	0	26
Total	89	7	1	97	87	5	0	92
Grand Total Number of Members	**154**	**58**	**35**	**247**	**166**	**66**	**33**	**265**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		1	1							**2**
35-39		3	4	3						**10**
40-44		1	2	3	1					**7**
45-49		1	1	3	4	2				**11**
50-54		1	4	2	4					**11**
55-59		1	1	4	1	1		1		**9**
60-64			1		1					**2**
65-69			1							**1**
70-74										
75+										
Total	**0**	**8**	**15**	**15**	**11**	**3**	**0**	**1**	**0**	**53**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	468
35-39		
40-44	6	1,071
45-49	8	1,176
50-54	8	1,104
55-59	10	608
60-64	2	651
65-69	3	1,072
70-74		
75+	1	275
Total	39	923

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49	1	21
50-54	4	1,975
55-59	7	1,834
60-64	22	1,912
65-69	22	1,638
70-74	17	1,517
75-79	11	1,705
80-84	7	1,552
85-89	3	559
90-94	1	366
95-99	1	1,226
100+		
Total	96	1,641

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Mt Angel/2174
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
City of Mt Angel/2174

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Mt Angel/2174

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Mt Angel -- #2174

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Mt Angel to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Mt Angel.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Mt Angel

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.72%)	(3.72%)	(3.72%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.21%**	**4.24%**	**8.34%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.77%**	**4.72%**	**8.82%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 106%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	7.61%	7.61%
Minimum July 1, 2015 Rate	4.61%	1.61%
Maximum July 1, 2015 Rate	10.61%	13.61%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$4,829,585	$3,996,812	($832,773)	121%	$685,789	(121%)
12/31/2008	3,684,050	4,162,510	478,460	89%	818,818	58%
12/31/2009	3,759,794	3,886,213	126,419	97%	715,310	18%
12/31/2010	4,098,119	3,915,133	(182,986)	105%	634,125	(29%)
12/31/2011	4,075,365	4,266,957	191,592	96%	814,389	24%
12/31/2012	4,514,828	4,265,668	(249,160)	106%	895,751	(28%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Mt Angel

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($249,160)	$191,592
Allocated pooled OPSRP UAL	63,135	13,895
Side account	0	0
Net unfunded pension actuarial accrued liability	(186,025)	205,487
Combined valuation payroll	895,751	814,389
Net pension UAL as a percentage of payroll	(21%)	25%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$18,793	$21,097

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$76,271	$37,616
Tier 1/Tier 2 valuation payroll	532,230	423,507
Tier 1/Tier 2 pension normal cost rate	14.33%	8.88%
Tier 1/ Tier 2 Actuarial accrued liability	$4,265,668	$4,266,957
Actuarial asset value	4,514,828	4,075,365
Tier 1/Tier 2 Unfunded actuarial accrued liability	(249,160)	191,592
Tier 1/ Tier 2 Funded status	106%	96%
Combined valuation payroll	$895,751	$814,389
Tier 1/Tier 2 UAL as a percentage of payroll	(28%)	24%
Tier 1/Tier 2 UAL rate	(3.72%)	1.23%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	10	8
Tier 1/Tier 2 dormant members	20	21
Tier 1/Tier 2 retirees and beneficiaries	48	43

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	895,751	814,389
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$820,466	$770,286
2. Employer reserves	2,521,960	2,180,652
3. Benefits in force reserve	1,172,402	1,124,427
4. Total market value of assets *(1. + 2. + 3.)*	**$4,514,828**	**$4,075,365**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$4,075,365
2. Regular employer contributions	41,506
3. Benefit payments and expenses	(184,134)
4. Adjustments[2]	44,639
5. Interest credited	537,453
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$4,514,828**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$212	$225
Tier 1 General Service	39,787	15,788
Tier 2 Police & Fire	11,182	11,014
Tier 2 General Service	25,090	10,589
Total	**$76,271**	**$37,616**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$51,144	$76,271	$25,127

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$566,495	$588,925
▪ Tier 1 General Service	654,757	649,692
▪ Tier 2 Police & Fire	368,584	290,872
▪ Tier 2 General Service	464,443	353,780
▪ **Total Active Members**	**$2,054,279**	**$1,883,269**
Dormant Members	235,730	338,652
Retired Members and Beneficiaries	1,975,659	2,045,036
Total Actuarial Accrued Liability	**$4,265,668**	**$4,266,957**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$4,393,084	$4,265,668	($127,416)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$4,265,668	$4,266,957
2. Actuarial value of assets	4,514,828	4,075,365
3. Unfunded accrued liability *(1. – 2.)*	(249,160)	191,592
4. Funded percentage *(2. ÷ 1.)*	106%	96%
5. Combined valuation payroll	$895,751	$814,389
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(28%)	24%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($249,160)	($18,034)
Total				**($249,160)**	**($18,034)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$4,266,957
b. Normal cost at December 31, 2011	37,616
c. Benefit payments during 2012	(182,693)
d. Interest at 8.0% to December 31, 2012	337,058
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	4,458,938
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(127,416)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	4,331,522
2. Actuarial accrued liability at December 31, 2012	4,265,668
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	65,854
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	4,075,365
b. Contributions for 2012[1]	41,506
c. Benefit payments and expenses during 2012	(184,134)
d. Interest at 8.0% to December 31, 2012	320,324
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	4,253,060
5. Actuarial value of assets at December 31, 2012	4,514,828
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	261,768
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$327,622**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$191,592**
2. Expected increase	14,286
3. Liability (gain)/loss	(65,854)
4. Asset (gain)/loss	(261,768)
5. Change due to changes in assumptions, methods, and plan provisions	(127,416)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($249,160)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$212	$1,242	17.07%	$225	$1,047	21.49%
Tier 1 General Service	39,787	236,294	16.84%	15,788	230,585	6.85%
Tier 2 Police & Fire	11,182	71,419	15.66%	11,014	75,290	14.63%
Tier 2 General Service	25,090	223,275	11.24%	10,589	116,585	9.08%
Total	**$76,271**	**$532,230**	**14.33%**	**$37,616**	**$423,507**	**8.88%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($249,160)	$191,592
2. Next year's Tier 1/Tier 2 UAL payment	(18,034)	8,955
3. Combined valuation payroll	895,751	814,389
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.01%)	1.10%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	8.88%
b. Tier 1/Tier 2 UAL rate	(2.01%)	1.10%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	12.45%	10.11%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	7.61%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	7.61%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.52%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	106%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	4.61%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	10.61%
7. July 1, 2015 total pension rate, before adjustment	12.45%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.84%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.01%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.85%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	10.61%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.33%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.33%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.61%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	8.88%
b. Tier 1/Tier 2 UAL rate	(3.85%)	1.10%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.61%	10.11%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$236,294	$1,242	$237,536
Tier 2	223,275	71,419	294,694
Tier 1/Tier 2 valuation payroll	459,569	72,661	532,230
OPSRP valuation payroll	112,574	250,947	363,521
Combined valuation payroll	**$572,143**	**$323,608**	**$895,751**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	5	4	5	14	5	2	5	12
Police & Fire	0	1	5	6	0	1	5	6
Total	5	5	10	20	5	3	10	18
Active Members with previous service segments with the employer								
General Service	9	8	N/A	17	12	14	N/A	26
Police & Fire	20	28	N/A	48	39	38	N/A	77
Total	29	36	N/A	65	51	52	N/A	103
Dormant Members								
General Service	7	3	0	10	6	3	0	9
Police & Fire	7	3	0	10	9	3	0	12
Total	14	6	0	20	15	6	0	21
Retired Members and Beneficiaries								
General Service	14	1	0	15	9	1	0	10
Police & Fire	29	4	0	33	29	4	0	33
Total	43	5	0	48	38	5	0	43
Grand Total Number of Members	**91**	**52**	**10**	**153**	**109**	**66**	**10**	**185**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			2							**2**
40-44			1	1						**2**
45-49										
50-54										
55-59			2	1		1				**4**
60-64										
65-69				1	1					**2**
70-74										
75+										
Total	**0**	**0**	**5**	**3**	**1**	**1**	**0**	**0**	**0**	**10**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	4
35-39		
40-44	2	123
45-49	4	1
50-54	4	248
55-59	5	52
60-64		
65-69	3	753
70-74		
75+	1	501
Total	20	213

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	4	1
45-49		
50-54	2	0
55-59	12	135
60-64	7	43
65-69	11	651
70-74	6	266
75-79	5	389
80-84	1	2,466
85-89		
90-94		
95-99		
100+		
Total	48	315

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Molalla/2290
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Molalla -- #2290

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Molalla to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Molalla.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Molalla

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.31%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.41%)	(3.41%)	(3.41%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.50%**	**4.55%**	**8.65%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.06%**	**5.03%**	**9.13%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 106%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	7.90%	7.90%
Minimum July 1, 2015 Rate	4.90%	1.90%
Maximum July 1, 2015 Rate	10.90%	13.90%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$11,550,923	$8,667,355	($2,883,568)	133%	$2,331,408	(124%)
12/31/2008	8,945,436	9,554,948	609,512	94%	2,305,653	26%
12/31/2009	10,301,439	10,259,527	(41,912)	100%	2,398,909	(2%)
12/31/2010	11,077,946	11,043,166	(34,780)	100%	2,775,435	(1%)
12/31/2011	11,117,542	11,296,702	179,160	98%	2,470,181	7%
12/31/2012	12,478,336	11,761,394	(716,942)	106%	2,512,747	(29%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Molalla

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($716,942)	$179,160
Allocated pooled OPSRP UAL	177,105	42,147
Side account	0	0
Net unfunded pension actuarial accrued liability	(539,837)	221,307
Combined valuation payroll	2,512,747	2,470,181
Net pension UAL as a percentage of payroll	(21%)	9%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$52,719	$63,991

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$201,852	$164,014
Tier 1/Tier 2 valuation payroll	1,410,476	1,550,184
Tier 1/Tier 2 pension normal cost rate	14.31%	10.58%
Tier 1/ Tier 2 Actuarial accrued liability	$11,761,394	$11,296,702
Actuarial asset value	12,478,336	11,117,542
Tier 1/Tier 2 Unfunded actuarial accrued liability	(716,942)	179,160
Tier 1/ Tier 2 Funded status	106%	98%
Combined valuation payroll	$2,512,747	$2,470,181
Tier 1/Tier 2 UAL as a percentage of payroll	(29%)	7%
Tier 1/Tier 2 UAL rate	(3.41%)	(0.18%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	19	25
Tier 1/Tier 2 dormant members	19	16
Tier 1/Tier 2 retirees and beneficiaries	32	29

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	2,512,747	2,470,181
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,536,242	$2,290,327
2. Employer reserves	7,507,323	6,589,440
3. Benefits in force reserve	2,434,772	2,237,775
4. Total market value of assets *(1. + 2. + 3.)*	**$12,478,336**	**$11,117,542**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$11,117,542
2.	Regular employer contributions	117,065
3.	Benefit payments and expenses	(382,398)
4.	Adjustments[2]	153,697
5.	Interest credited	1,472,431
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$12,478,336**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$34,749	$23,639
Tier 1 General Service	55,344	15,255
Tier 2 Police & Fire	73,816	73,746
Tier 2 General Service	37,943	51,374
Total	**$201,852**	**$164,014**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$156,028	$201,852	$45,824

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$1,207,250	$1,098,909
▪ Tier 1 General Service	2,196,733	2,931,169
▪ Tier 2 Police & Fire	1,264,289	926,729
▪ Tier 2 General Service	742,476	807,344
▪ **Total Active Members**	**$5,410,748**	**$5,764,151**
Dormant Members	2,247,719	1,462,628
Retired Members and Beneficiaries	4,102,927	4,069,923
Total Actuarial Accrued Liability	**$11,761,394**	**$11,296,702**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$12,010,578	$11,761,394	($249,184)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$11,761,394	$11,296,702
2. Actuarial value of assets	12,478,336	11,117,542
3. Unfunded accrued liability *(1. – 2.)*	(716,942)	179,160
4. Funded percentage *(2. ÷ 1.)*	106%	98%
5. Combined valuation payroll	$2,512,747	$2,470,181
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(29%)	7%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($716,942)	($51,892)
Total				**($716,942)**	**($51,892)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$11,296,702
b. Normal cost at December 31, 2011	164,014
c. Benefit payments during 2012	(379,405)
d. Interest at 8.0% to December 31, 2012	901,681
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	11,982,992
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(249,184)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	11,733,808
2. Actuarial accrued liability at December 31, 2012	11,761,394
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(27,586)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	11,117,542
b. Contributions for 2012[1]	117,065
c. Benefit payments and expenses during 2012	(382,398)
d. Interest at 8.0% to December 31, 2012	878,790
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	11,730,998
5. Actuarial value of assets at December 31, 2012	12,478,336
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	747,338
7. Total actuarial gain/(loss) *(3. + 6.)*	**$719,752**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$179,160**
2. Expected increase	72,834
3. Liability (gain)/loss	27,586
4. Asset (gain)/loss	(747,338)
5. Change due to changes in assumptions, methods, and plan provisions	(249,184)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**($716,942)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$34,749	$190,059	18.28%	$23,639	$176,305	13.41%
Tier 1 General Service	55,344	278,159	19.90%	15,255	354,832	4.30%
Tier 2 Police & Fire	73,816	542,938	13.60%	73,746	557,518	13.23%
Tier 2 General Service	37,943	399,320	9.50%	51,374	461,529	11.13%
Total	**$201,852**	**$1,410,476**	**14.31%**	**$164,014**	**$1,550,184**	**10.58%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($716,942)	$179,160
2. Next year's Tier 1/Tier 2 UAL payment	(51,892)	(7,570)
3. Combined valuation payroll	2,512,747	2,470,181
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.07%)	(0.31%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.31%	10.58%
b. Tier 1/Tier 2 UAL rate	(2.07%)	(0.31%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	12.37%	10.40%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	7.90%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	7.90%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.58%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	106%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	4.90%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	10.90%
7. July 1, 2015 total pension rate, before adjustment	12.37%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.47%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.07%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.54%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	10.90%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.31%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.31%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.90%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.31%	10.58%
b. Tier 1/Tier 2 UAL rate	(3.54%)	(0.31%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.90%	10.40%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$278,159	$190,059	$468,218
Tier 2	399,320	542,938	942,258
Tier 1/Tier 2 valuation payroll	677,479	732,997	1,410,476
OPSRP valuation payroll	897,697	204,574	1,102,271
Combined valuation payroll	**$1,575,176**	**$937,571**	**$2,512,747**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	4	7	33	44	6	10	37	53
Police & Fire	2	6	3	11	2	7	2	11
Total	6	13	36	55	8	17	39	64
Active Members with previous service segments with the employer								
General Service	3	1	N/A	4	8	2	N/A	10
Police & Fire	1	0	N/A	1	2	2	N/A	4
Total	4	1	N/A	5	10	4	N/A	14
Dormant Members								
General Service	8	8	4	20	7	6	1	14
Police & Fire	3	0	0	3	3	0	0	3
Total	11	8	4	23	10	6	1	17
Retired Members and Beneficiaries								
General Service	17	6	0	23	17	3	0	20
Police & Fire	4	5	0	9	4	5	0	9
Total	21	11	0	32	21	8	0	29
Grand Total Number of Members	**42**	**33**	**40**	**115**	**49**	**35**	**40**	**124**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39			4							**4**
40-44			3	2						**5**
45-49			1							**1**
50-54				2			1			**3**
55-59			1	1		1				**3**
60-64			1	1				1		**3**
65-69										
70-74										
75+										
Total	**0**	**0**	**10**	**6**	**0**	**1**	**1**	**1**	**0**	**19**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29	1	3
30-34		
35-39	1	57
40-44	3	2,311
45-49	4	1,739
50-54	3	969
55-59	3	994
60-64	1	7
65-69	1	4,813
70-74	2	227
75+		
Total	19	1,322

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	4	978
60-64	6	915
65-69	11	834
70-74	8	937
75-79	3	1,294
80-84		
85-89		
90-94		
95-99		
100+		
Total	32	936

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Metolius/2195
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Metolius/2195

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott Preppernau
Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Metolius -- #2195

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Metolius to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Metolius.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Metolius

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(11.89%)	(11.89%)	(11.89%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**6.04%**	**0.00%**	**0.17%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**6.60%**	**0.48%**	**0.65%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 198%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$647,643	$351,298	($296,345)	184%	$114,091	(260%)
12/31/2008	477,812	357,040	(120,772)	134%	97,627	(124%)
12/31/2009	567,870	372,882	(194,988)	152%	108,522	(180%)
12/31/2010	627,697	395,551	(232,146)	159%	98,739	(235%)
12/31/2011	560,285	312,071	(248,214)	180%	106,200	(234%)
12/31/2012	630,653	318,594	(312,059)	198%	98,438	(317%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Metolius

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($312,059)	($248,214)
Allocated pooled OPSRP UAL	6,938	1,812
Side account	0	0
Net unfunded pension actuarial accrued liability	(305,121)	(246,402)
Combined valuation payroll	98,438	106,200
Net pension UAL as a percentage of payroll	(310%)	(232%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,065	$2,751

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$7,218	$4,114
Tier 1/Tier 2 valuation payroll	60,731	71,400
Tier 1/Tier 2 pension normal cost rate	17.33%	11.17%
Tier 1/ Tier 2 Actuarial accrued liability	$318,594	$312,071
Actuarial asset value	630,653	560,285
Tier 1/Tier 2 Unfunded actuarial accrued liability	(312,059)	(248,214)
Tier 1/ Tier 2 Funded status	198%	180%
Combined valuation payroll	$98,438	$106,200
Tier 1/Tier 2 UAL as a percentage of payroll	(317%)	(234%)
Tier 1/Tier 2 UAL rate	(11.89%)	(5.76%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	3
Tier 1/Tier 2 dormant members	5	4
Tier 1/Tier 2 retirees and beneficiaries	4	4

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	98,438	106,200
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$66,982	$58,747
2. Employer reserves	479,767	419,258
3. Benefits in force reserve	83,904	82,280
4. Total market value of assets ***(1. + 2. + 3.)***	**$630,653**	**$560,285**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$560,285
2.	Regular employer contributions	366
3.	Benefit payments and expenses	(13,178)
4.	Adjustments [2]	6,469
5.	Interest credited	76,711
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$630,653**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	4,112	1,062
Tier 2 Police & Fire	0	0
Tier 2 General Service	3,106	3,052
Total	**$7,218**	**$4,114**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,567	$7,218	$2,651

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$186	$1,139
▪ Tier 1 General Service	98,863	88,282
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	61,588	57,603
▪ **Total Active Members**	**$160,637**	**$147,024**
Dormant Members	16,566	15,401
Retired Members and Beneficiaries	141,391	149,646
Total Actuarial Accrued Liability	**$318,594**	**$312,071**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$324,031	$318,594	($5,437)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$318,594	$312,071
2. Actuarial value of assets	630,653	560,285
3. Unfunded accrued liability *(1. – 2.)*	(312,059)	(248,214)
4. Funded percentage *(2. ÷ 1.)*	198%	180%
5. Combined valuation payroll	$98,438	$106,200
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(317%)	(234%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($312,059)	($22,587)
Total				**($312,059)**	**($22,587)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$312,071
b. Normal cost at December 31, 2011	4,114
c. Benefit payments during 2012	(13,075)
d. Interest at 8.0% to December 31, 2012	24,772
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	327,882
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(5,437)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	322,445
2. Actuarial accrued liability at December 31, 2012	318,594
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	3,851
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	560,285
b. Contributions for 2012[1]	366
c. Benefit payments and expenses during 2012	(13,178)
d. Interest at 8.0% to December 31, 2012	44,310
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	591,783
5. Actuarial value of assets at December 31, 2012	630,653
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	38,870
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$42,721**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($248,214)**
2. Expected increase	(15,687)
3. Liability (gain)/loss	(3,851)
4. Asset (gain)/loss	(38,870)
5. Change due to changes in assumptions, methods, and plan provisions	(5,437)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($312,059)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	4,112	36,828	11.17%	1,062	36,370	2.92%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	3,106	23,903	12.99%	3,052	35,030	8.71%
Total	**$7,218**	**$60,731**	**11.89%**	**$4,114**	**$71,400**	**5.76%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($312,059)	($248,214)
2. Next year's Tier 1/Tier 2 UAL payment	(22,587)	(21,417)
3. Combined valuation payroll	98,438	106,200
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(22.95%)	(20.17%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.89%	5.76%
b. Tier 1/Tier 2 UAL rate	(22.95%)	(20.17%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	(10.93%)	(14.28%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	198%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	0.00%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. July 1, 2015 total pension rate, before adjustment	(10.93%)
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	10.93%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(22.95%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(12.02%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	0.00%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	5.44%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.89%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.33%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	5.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.33%	11.17%
b. Tier 1/Tier 2 UAL rate	(12.02%)	(5.89%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	5.44%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$36,828	$0	$36,828
Tier 2	23,903	0	23,903
Tier 1/Tier 2 valuation payroll	60,731	0	60,731
OPSRP valuation payroll	37,707	0	37,707
Combined valuation payroll	**$98,438**	**$0**	**$98,438**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	1	1	3	1	2	1	4
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	1	3	1	2	1	4
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	2	0	N/A	2
Police & Fire	0	0	N/A	0	1	0	N/A	1
Total	1	0	N/A	1	3	0	N/A	3
Dormant Members								
General Service	1	2	0	3	1	1	0	2
Police & Fire	2	0	0	2	2	0	0	2
Total	3	2	0	5	3	1	0	4
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	2	1	0	3	2	1	0	3
Total	3	1	0	4	3	1	0	4
Grand Total Number of Members	**8**	**4**	**1**	**13**	**10**	**4**	**1**	**15**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54				1						1
55-59				1						1
60-64										
65-69										
70-74										
75+										
Total	0	0	0	2	0	0	0	0	0	2

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	20
50-54		
55-59	1	0
60-64	1	1,019
65-69		
70-74	1	146
75+	1	71
Total	5	251

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	2
55-59		
60-64	1	3
65-69		
70-74	2	592
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	4	297

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Merrill/2246
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Merrill/2246

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Merrill/2246

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Merrill -- #2246

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Merrill to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Merrill.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Merrill

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.16%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(8.75%)	(8.75%)	(8.75%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**0.00%**	**3.31%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**0.48%**	**3.79%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 116%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$360,009	$283,701	($76,308)	127%	$9,905	(770%)
12/31/2008	287,155	330,882	43,727	87%	12,463	351%
12/31/2009	326,530	289,667	(36,863)	113%	7,631	(483%)
12/31/2010	358,924	319,024	(39,900)	113%	48,700	(82%)
12/31/2011	366,777	352,212	(14,565)	104%	49,748	(29%)
12/31/2012	419,097	360,969	(58,128)	116%	48,798	(119%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Merrill

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($58,128)	($14,565)
Allocated pooled OPSRP UAL	3,439	849
Side account	0	0
Net unfunded pension actuarial accrued liability	(54,689)	(13,716)
Combined valuation payroll	48,798	49,748
Net pension UAL as a percentage of payroll	(112%)	(28%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,024	$1,289

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$8,373	$4,968
Tier 1/Tier 2 valuation payroll	48,798	49,748
Tier 1/Tier 2 pension normal cost rate	17.16%	9.99%
Tier 1/ Tier 2 Actuarial accrued liability	$360,969	$352,212
Actuarial asset value	419,097	366,777
Tier 1/Tier 2 Unfunded actuarial accrued liability	(58,128)	(14,565)
Tier 1/ Tier 2 Funded status	116%	104%
Combined valuation payroll	$48,798	$49,748
Tier 1/Tier 2 UAL as a percentage of payroll	(119%)	(29%)
Tier 1/Tier 2 UAL rate	(8.75%)	(3.52%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	6	6

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	48,798	49,748
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$109,437	$96,185
2. Employer reserves	280,851	243,110
3. Benefits in force reserve	28,809	27,482
4. Total market value of assets ***(1. + 2. + 3.)***	**$419,097**	**$366,777**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$366,777
2.	Regular employer contributions	2,518
3.	Benefit payments and expenses	(4,525)
4.	Adjustments [2]	7,206
5.	Interest credited	47,121
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$419,097**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$8,373	$4,968
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$8,373**	**$4,968**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,881	$8,373	$3,492

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$48,815	$37,146
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	3,680	5,206
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$52,495**	**$42,352**
Dormant Members	259,926	259,877
Retired Members and Beneficiaries	48,548	49,983
Total Actuarial Accrued Liability	**$360,969**	**$352,212**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$382,217	$360,969	($21,248)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$360,969	$352,212
2. Actuarial value of assets	419,097	366,777
3. Unfunded accrued liability *(1. – 2.)*	(58,128)	(14,565)
4. Funded percentage *(2. ÷ 1.)*	116%	104%
5. Combined valuation payroll	$48,798	$49,748
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(119%)	(29%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($58,128)	($4,207)
Total				**($58,128)**	**($4,207)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$352,212
b. Normal cost at December 31, 2011	4,968
c. Benefit payments during 2012	(4,489)
d. Interest at 8.0% to December 31, 2012	28,395
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	381,086
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(21,248)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	359,838
2. Actuarial accrued liability at December 31, 2012	360,969
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,131)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	366,777
b. Contributions for 2012[1]	2,518
c. Benefit payments and expenses during 2012	(4,525)
d. Interest at 8.0% to December 31, 2012	29,262
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	394,032
5. Actuarial value of assets at December 31, 2012	419,097
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	25,065
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$23,934**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($14,565)**
2. Expected increase	1,619
3. Liability (gain)/loss	1,131
4. Asset (gain)/loss	(25,065)
5. Change due to changes in assumptions, methods, and plan provisions	(21,248)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($58,128)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$8,373	$48,798	17.16%	$4,968	$49,748	9.99%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$8,373**	**$48,798**	**17.16%**	**$4,968**	**$49,748**	**9.99%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($58,128)	($14,565)
2. Next year's Tier 1/Tier 2 UAL payment	(4,207)	(1,814)
3. Combined valuation payroll	48,798	49,748
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(8.62%)	(3.65%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.16%	9.99%
b. Tier 1/Tier 2 UAL rate	(8.62%)	(3.65%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	8.67%	6.47%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	5.41%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	116%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5.	July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6.	July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7.	July 1, 2015 total pension rate, before adjustment	8.67%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.26%)
9.	July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(8.62%)
10.	July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(8.88%)
11.	July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12.	Tier 1/Tier 2 retiree healthcare rate	0.56%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.16%
15.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.16%
16.	July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.16%	9.99%
b. Tier 1/Tier 2 UAL rate	(8.88%)	(3.65%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	6.47%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$48,798	$48,798
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	48,798	48,798
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$48,798**	**$48,798**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	1	N/A	1	0	1	N/A	1
Total	0	1	N/A	1	0	1	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	1	2	1	0	0	1
Total	1	0	1	2	1	0	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	4	2	0	6	4	2	0	6
Total	4	2	0	6	4	2	0	6
Grand Total Number of Members	**6**	**3**	**1**	**10**	**6**	**3**	**0**	**9**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54				1						**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	1,701
60-64		
65-69		
70-74		
75+		
Total	1	1,701

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	15
65-69	1	257
70-74	1	9
75-79		
80-84	1	52
85-89	1	107
90-94		
95-99		
100+		
Total	6	76

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Maupin/2283
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Maupin/2283

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Maupin/2283

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Maupin -- #2283

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Maupin to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Maupin.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Maupin

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.96%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(4.50%)	(4.50%)	(4.50%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.06%**	**3.46%**	**7.56%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.62%**	**3.94%**	**8.04%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 113%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.46%	5.46%
Minimum July 1, 2015 Rate	2.46%	0.00%
Maximum July 1, 2015 Rate	8.46%	11.46%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$681,319	$607,826	($73,493)	112%	$268,477	(27%)
12/31/2008	593,257	672,812	79,555	88%	280,132	28%
12/31/2009	707,555	716,581	9,026	99%	319,315	3%
12/31/2010	787,391	789,323	1,932	100%	331,614	1%
12/31/2011	832,750	878,410	45,660	95%	358,633	13%
12/31/2012	964,281	850,528	(113,753)	113%	330,436	(34%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Maupin

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($113,753)	$45,660
Allocated pooled OPSRP UAL	23,290	6,119
Side account	0	0
Net unfunded pension actuarial accrued liability	(90,463)	51,779
Combined valuation payroll	330,436	358,633
Net pension UAL as a percentage of payroll	(27%)	14%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$6,933	$9,291

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$28,135	$18,109
Tier 1/Tier 2 valuation payroll	217,152	245,528
Tier 1/Tier 2 pension normal cost rate	12.96%	7.38%
Tier 1/ Tier 2 Actuarial accrued liability	$850,528	$878,410
Actuarial asset value	964,281	832,750
Tier 1/Tier 2 Unfunded actuarial accrued liability	(113,753)	45,660
Tier 1/ Tier 2 Funded status	113%	95%
Combined valuation payroll	$330,436	$358,633
Tier 1/Tier 2 UAL as a percentage of payroll	(34%)	13%
Tier 1/Tier 2 UAL rate	(4.50%)	0.86%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	4	5
Tier 1/Tier 2 dormant members	1	0
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	330,436	358,633
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$335,542	$295,070
2. Employer reserves	623,558	532,668
3. Benefits in force reserve	5,181	5,012
4. Total market value of assets ***(1. + 2. + 3.)***	**$964,281**	**$832,750**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$832,750
2. Regular employer contributions	12,884
3. Benefit payments and expenses	(814)
4. Adjustments[2]	15,710
5. Interest credited	103,751
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$964,281**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	28,135	15,157
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	2,952
Total	**$28,135**	**$18,109**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$15,096	$28,135	$13,039

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	834,098	840,249
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	29,045
▪ **Total Active Members**	**$834,098**	**$869,294**
Dormant Members	7,699	0
Retired Members and Beneficiaries	8,731	9,116
Total Actuarial Accrued Liability	**$850,528**	**$878,410**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$931,491	$850,528	($80,963)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$850,528	$878,410
2. Actuarial value of assets	964,281	832,750
3. Unfunded accrued liability *(1. – 2.)*	(113,753)	45,660
4. Funded percentage *(2. ÷ 1.)*	113%	95%
5. Combined valuation payroll	$330,436	$358,633
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(34%)	13%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($113,753)	($8,233)
Total				**($113,753)**	**($8,233)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$878,410
b. Normal cost at December 31, 2011	18,109
c. Benefit payments during 2012	(807)
d. Interest at 8.0% to December 31, 2012	71,689
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	967,401
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(80,963)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	886,438
2. Actuarial accrued liability at December 31, 2012	850,528
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	35,910
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	832,750
b. Contributions for 2012[1]	12,884
c. Benefit payments and expenses during 2012	(814)
d. Interest at 8.0% to December 31, 2012	67,103
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	911,922
5. Actuarial value of assets at December 31, 2012	964,281
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	52,358
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$88,268**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$45,660**
2. Expected increase	9,818
3. Liability (gain)/loss	(35,910)
4. Asset (gain)/loss	(52,358)
5. Change due to changes in assumptions, methods, and plan provisions	(80,963)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($113,753)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	28,135	217,152	12.96%	15,157	209,476	7.24%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	2,952	36,052	8.19%
Total	**$28,135**	**$217,152**	**12.96%**	**$18,109**	**$245,528**	**7.38%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($113,753)	$45,660
2. Next year's Tier 1/Tier 2 UAL payment	(8,233)	2,607
3. Combined valuation payroll	330,436	358,633
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.49%)	0.73%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.96%	7.38%
b. Tier 1/Tier 2 UAL rate	(2.49%)	0.73%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.60%	8.24%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.46%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.46%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.09%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	113%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.46%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.46%
7. July 1, 2015 total pension rate, before adjustment	10.60%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.14%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.49%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(4.63%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.46%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.96%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.96%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.46%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.96%	7.38%
b. Tier 1/Tier 2 UAL rate	(4.63%)	0.73%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.46%	8.24%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$217,152	$0	$217,152
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	217,152	0	217,152
OPSRP valuation payroll	113,284	0	113,284
Combined valuation payroll	**$330,436**	**$0**	**$330,436**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	4	0	4	8	4	1	5	10
Police & Fire	0	0	0	0	0	0	0	0
Total	4	0	4	8	4	1	5	10
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	1	0	1	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**6**	**1**	**4**	**11**	**6**	**1**	**5**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54						2				**2**
55-59										
60-64										
65-69					1					**1**
70-74	1									**1**
75+										
Total	**1**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**4**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	170
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	170

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74	1	62
75-79	1	17
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	40

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Keizer/2279
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
City of Keizer/2279

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Keizer/2279

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Keizer -- #2279

Secondary Employers

2539 Keizer Water District

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Keizer to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Keizer.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Keizer

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.47%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.52%)	(2.52%)	(2.52%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.55%**	**5.44%**	**9.54%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.11%**	**5.92%**	**10.02%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 96%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	9.95%	9.95%
Minimum July 1, 2015 Rate	6.95%	3.95%
Maximum July 1, 2015 Rate	12.95%	15.95%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$14,469,554	$11,359,526	($3,110,028)	127%	$3,071,890	(101%)
12/31/2008	11,704,780	12,202,765	497,985	96%	3,318,225	15%
12/31/2009	13,407,773	13,634,579	226,806	98%	3,677,284	6%
12/31/2010	14,718,129	14,359,732	(358,397)	103%	5,955,156	(6%)
12/31/2011	14,874,482	15,789,873	915,391	94%	5,827,628	16%
12/31/2012	16,637,219	17,416,511	779,292	96%	5,961,984	13%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Keizer

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$779,292	$915,391
Allocated pooled OPSRP UAL	420,217	99,433
Side account	0	0
Net unfunded pension actuarial accrued liability	1,199,509	1,014,824
Combined valuation payroll	5,961,984	5,827,628
Net pension UAL as a percentage of payroll	20%	17%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$125,085	$150,968

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$492,092	$444,543
Tier 1/Tier 2 valuation payroll	3,181,740	3,029,402
Tier 1/Tier 2 pension normal cost rate	15.47%	14.67%
Tier 1/ Tier 2 Actuarial accrued liability	$17,416,511	$15,789,873
Actuarial asset value	16,637,219	14,874,482
Tier 1/Tier 2 Unfunded actuarial accrued liability	779,292	915,391
Tier 1/ Tier 2 Funded status	96%	94%
Combined valuation payroll	$5,961,984	$5,827,628
Tier 1/Tier 2 UAL as a percentage of payroll	13%	16%
Tier 1/Tier 2 UAL rate	(2.52%)	(1.72%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	37	37
Tier 1/Tier 2 dormant members	5	5
Tier 1/Tier 2 retirees and beneficiaries	15	14

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	5,961,984	5,827,628
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$3,491,682	$3,251,663
2. Employer reserves	10,386,217	9,216,674
3. Benefits in force reserve	2,759,320	2,406,145
4. Total market value of assets ***(1. + 2. + 3.)***	**$16,637,219**	**$14,874,482**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$14,874,482
2.	Regular employer contributions	194,041
3.	Benefit payments and expenses	(433,371)
4.	Adjustments[2]	39,445
5.	Interest credited	1,962,622
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$16,637,219**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$320,255	$304,844
Tier 1 General Service	19,469	5,770
Tier 2 Police & Fire	109,515	88,434
Tier 2 General Service	42,853	45,495
Total	**$492,092**	**$444,543**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$496,978	$492,092	($4,886)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$9,383,271	$9,292,263
▪ Tier 1 General Service	88,997	59,700
▪ Tier 2 Police & Fire	2,043,312	1,443,659
▪ Tier 2 General Service	342,899	188,388
▪ **Total Active Members**	**$11,858,479**	**$10,984,010**
Dormant Members	908,197	429,721
Retired Members and Beneficiaries	4,649,835	4,376,142
Total Actuarial Accrued Liability	**$17,416,511**	**$15,789,873**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$17,306,037	$17,416,511	$110,474

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$17,416,511	$15,789,873
2. Actuarial value of assets	16,637,219	14,874,482
3. Unfunded accrued liability *(1. – 2.)*	779,292	915,391
4. Funded percentage *(2. ÷ 1.)*	96%	94%
5. Combined valuation payroll	$5,961,984	$5,827,628
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	13%	16%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$779,292	$56,405
Total				**$779,292**	**$56,405**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$15,789,873
b. Normal cost at December 31, 2011	444,543
c. Benefit payments during 2012	(429,978)
d. Interest at 8.0% to December 31, 2012	1,281,554
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	17,085,992
f. Change in actuarial accrued liability due to assumption, method, and plan changes	110,474
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	17,196,466
2. Actuarial accrued liability at December 31, 2012	17,416,511
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(220,045)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	14,874,482
b. Contributions for 2012[1]	194,041
c. Benefit payments and expenses during 2012	(433,371)
d. Interest at 8.0% to December 31, 2012	1,180,385
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	15,815,537
5. Actuarial value of assets at December 31, 2012	16,637,219
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	821,682
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$601,637**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$915,391**
2. Expected increase	355,064
3. Liability (gain)/loss	220,045
4. Asset (gain)/loss	(821,682)
5. Change due to changes in assumptions, methods, and plan provisions	110,474
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$779,292**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$320,255	$1,785,804	17.93%	$304,844	$1,794,017	16.99%
Tier 1 General Service	19,469	173,480	11.22%	5,770	162,822	3.54%
Tier 2 Police & Fire	109,515	737,025	14.86%	88,434	665,577	13.29%
Tier 2 General Service	42,853	485,431	8.83%	45,495	406,986	11.18%
Total	**$492,092**	**$3,181,740**	**15.47%**	**$444,543**	**$3,029,402**	**14.67%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$779,292	$915,391
2. Next year's Tier 1/Tier 2 UAL payment	56,405	48,315
3. Combined valuation payroll	5,961,984	5,827,628
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.95%	0.83%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.47%	14.67%
b. Tier 1/Tier 2 UAL rate	0.95%	0.83%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.55%	15.63%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.95%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.95%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.99%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.95%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	12.95%
7. July 1, 2015 total pension rate, before adjustment	16.55%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.60%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.95%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.65%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.95%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.47%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.47%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.47%	14.67%
b. Tier 1/Tier 2 UAL rate	(2.65%)	(1.85%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.95%	12.95%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$173,480	$1,785,804	$1,959,284
Tier 2	485,431	737,025	1,222,456
Tier 1/Tier 2 valuation payroll	658,911	2,522,829	3,181,740
OPSRP valuation payroll	2,212,378	567,866	2,780,244
Combined valuation payroll	**$2,871,289**	**$3,090,695**	**$5,961,984**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	6	38	46	2	5	42	49
Police & Fire	20	9	8	37	21	9	7	37
Total	22	15	46	83	23	14	49	86
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	1	0	N/A	1
Police & Fire	4	1	N/A	5	15	7	N/A	22
Total	4	1	N/A	5	16	7	N/A	23
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	4	1	0	5	4	1	0	5
Total	4	1	0	5	4	1	0	5
Retired Members and Beneficiaries								
General Service	5	0	0	5	5	0	0	5
Police & Fire	10	0	0	10	9	0	0	9
Total	15	0	0	15	14	0	0	14
Grand Total Number of Members	**45**	**17**	**46**	**108**	**57**	**22**	**49**	**128**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39		3	2							**5**
40-44			7	7	2					**16**
45-49				4	5					**9**
50-54					1	1				**2**
55-59		2	1				1			**4**
60-64	1									**1**
65-69										
70-74										
75+										
Total	**1**	**5**	**10**	**11**	**8**	**1**	**1**	**0**	**0**	**37**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	2	1,195
45-49	1	5,064
50-54	2	1,265
55-59		
60-64		
65-69		
70-74		
75+		
Total	5	1,997

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	3,150
55-59	3	852
60-64	6	2,582
65-69	3	2,584
70-74	1	386
75-79		
80-84		
85-89	1	2,321
90-94		
95-99		
100+		
Total	15	2,111

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Joseph/2232
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Joseph/2232

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Joseph/2232

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Joseph -- #2232

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Joseph to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Joseph.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Joseph

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.51%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.74%	4.74%	4.74%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.85%**	**12.70%**	**16.80%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.41%**	**13.18%**	**17.28%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 83%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.25%	13.25%
Minimum July 1, 2015 Rate	10.25%	7.25%
Maximum July 1, 2015 Rate	16.25%	19.25%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$967,742	$941,036	($26,706)	103%	$182,616	(15%)
12/31/2008	671,776	917,100	245,324	73%	139,460	176%
12/31/2009	764,563	947,395	182,832	81%	173,248	106%
12/31/2010	820,617	992,526	171,909	83%	187,023	92%
12/31/2011	777,639	1,026,462	248,823	76%	133,837	186%
12/31/2012	855,476	1,025,082	169,606	83%	129,996	130%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Joseph

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
T1/T2 UAL	$169,606	$248,823
Allocated pooled OPSRP UAL	9,162	2,284
Side account	0	0
Net unfunded pension actuarial accrued liability	178,768	251,107
Combined valuation payroll	129,996	133,837
Net pension UAL as a percentage of payroll	138%	188%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,727	$3,467

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$6,020	$4,629
Tier 1/Tier 2 valuation payroll	52,301	48,001
Tier 1/Tier 2 pension normal cost rate	11.51%	9.64%
Tier 1/ Tier 2 Actuarial accrued liability	$1,025,082	$1,026,462
Actuarial asset value	855,476	777,639
Tier 1/Tier 2 Unfunded actuarial accrued liability	169,606	248,823
Tier 1/ Tier 2 Funded status	83%	76%
Combined valuation payroll	$129,996	$133,837
Tier 1/Tier 2 UAL as a percentage of payroll	130%	186%
Tier 1/Tier 2 UAL rate	4.74%	7.81%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	129,996	133,837
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$89,847	$77,178
2. Employer reserves	318,972	266,889
3. Benefits in force reserve	446,657	433,573
4. Total market value of assets ***(1. + 2. + 3.)***	**$855,476**	**$777,639**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$777,639
2. Regular employer contributions	12,135
3. Benefit payments and expenses	(70,151)
4. Adjustments [2]	30,808
5. Interest credited	105,044
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$855,476**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	6,020	4,629
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$6,020**	**$4,629**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$5,515	$6,020	$505

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	146,904	115,950
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$146,904**	**$115,950**
Dormant Members	125,500	121,958
Retired Members and Beneficiaries	752,678	788,554
Total Actuarial Accrued Liability	**$1,025,082**	**$1,026,462**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,051,611	$1,025,082	($26,529)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,025,082	$1,026,462
2. Actuarial value of assets	855,476	777,639
3. Unfunded accrued liability *(1. – 2.)*	169,606	248,823
4. Funded percentage *(2. ÷ 1.)*	83%	76%
5. Combined valuation payroll	$129,996	$133,837
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	130%	186%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$169,606	$12,276
Total				**$169,606**	**$12,276**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,026,462
b. Normal cost at December 31, 2011	4,629
c. Benefit payments during 2012	(69,601)
d. Interest at 8.0% to December 31, 2012	79,703
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,041,193
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(26,529)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,014,664
2. Actuarial accrued liability at December 31, 2012	1,025,082
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(10,418)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	777,639
b. Contributions for 2012[1]	12,135
c. Benefit payments and expenses during 2012	(70,151)
d. Interest at 8.0% to December 31, 2012	59,891
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	779,514
5. Actuarial value of assets at December 31, 2012	855,476
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	75,962
7. Total actuarial gain/(loss) *(3. + 6.)*	**$65,544**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$248,823**
2. Expected increase	12,856
3. Liability (gain)/loss	10,418
4. Asset (gain)/loss	(75,962)
5. Change due to changes in assumptions, methods, and plan provisions	(26,529)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$169,606**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	6,020	52,301	11.51%	4,629	48,001	9.64%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$6,020**	**$52,301**	**11.51%**	**$4,629**	**$48,001**	**9.64%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$169,606	$248,823
2. Next year's Tier 1/Tier 2 UAL payment	12,276	18,983
3. Combined valuation payroll	129,996	133,837
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	9.44%	14.18%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.51%	9.64%
b. Tier 1/Tier 2 UAL rate	9.44%	14.18%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	21.08%	23.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.25%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.25%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.65%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	83%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.25%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.25%
7. July 1, 2015 total pension rate, before adjustment	21.08%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.83%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	9.44%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.61%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.25%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.51%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.51%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.25%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.51%	9.64%
b. Tier 1/Tier 2 UAL rate	4.61%	7.68%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.25%	17.45%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$52,301	$0	$52,301
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	52,301	0	52,301
OPSRP valuation payroll	77,695	0	77,695
Combined valuation payroll	**$129,996**	**$0**	**$129,996**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	0	3	5	2	0	3	5
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	3	5	2	0	3	5
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	1	1	0	2	1	1	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	0	2	1	1	0	2
Retired Members and Beneficiaries								
General Service	4	1	0	5	4	1	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	4	1	0	5	4	1	0	5
Grand Total Number of Members	**7**	**2**	**3**	**12**	**7**	**2**	**3**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49				1						1
50-54										
55-59				1						1
60-64										
65-69										
70-74										
75+										
Total	0	0	0	2	0	0	0	0	0	2

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	374
35-39		
40-44		
45-49		
50-54		
55-59		
60-64	1	837
65-69		
70-74		
75+		
Total	2	606

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	2	1,750
70-74	2	1,246
75-79	1	443
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	1,287

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Jacksonville/2222
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Jacksonville/2222

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Jacksonville/2222

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Jacksonville -- #2222

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Jacksonville to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Jacksonville.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Jacksonville

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.32%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.24%)	(0.24%)	(0.24%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.68%**	**7.72%**	**11.82%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.24%**	**8.20%**	**12.30%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 93%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.08%	11.08%
Minimum July 1, 2015 Rate	8.08%	5.08%
Maximum July 1, 2015 Rate	14.08%	17.08%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$3,139,017	$2,710,882	($428,135)	116%	$874,617	(49%)
12/31/2008	2,427,908	2,950,462	522,554	82%	931,696	56%
12/31/2009	2,892,816	3,153,727	260,911	92%	907,545	29%
12/31/2010	3,089,410	3,322,938	233,528	93%	939,937	25%
12/31/2011	3,132,652	3,510,590	377,938	89%	877,859	43%
12/31/2012	3,582,220	3,837,033	254,814	93%	989,332	26%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Jacksonville

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$254,813	$377,938
Allocated pooled OPSRP UAL	69,731	14,978
Side account	0	0
Net unfunded pension actuarial accrued liability	324,544	392,916
Combined valuation payroll	989,332	877,859
Net pension UAL as a percentage of payroll	33%	45%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$20,757	$22,741

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$76,586	$62,263
Tier 1/Tier 2 valuation payroll	534,866	552,248
Tier 1/Tier 2 pension normal cost rate	14.32%	11.27%
Tier 1/ Tier 2 Actuarial accrued liability	$3,837,033	$3,510,590
Actuarial asset value	3,582,220	3,132,652
Tier 1/Tier 2 Unfunded actuarial accrued liability	254,813	377,938
Tier 1/ Tier 2 Funded status	93%	89%
Combined valuation payroll	$989,332	$877,859
Tier 1/Tier 2 UAL as a percentage of payroll	26%	43%
Tier 1/Tier 2 UAL rate	(0.24%)	2.81%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	11	12
Tier 1/Tier 2 dormant members	5	4
Tier 1/Tier 2 retirees and beneficiaries	11	11

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	989,332	877,859
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$766,399	$665,865
2. Employer reserves	2,191,511	1,855,269
3. Benefits in force reserve	624,310	611,519
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,582,220**	**$3,132,652**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$3,132,652
2.	Regular employer contributions	61,881
3.	Benefit payments and expenses	(98,052)
4.	Adjustments [2]	61,777
5.	Interest credited	423,962
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,582,220**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$29,620	$20,860
Tier 1 General Service	23,250	13,556
Tier 2 Police & Fire	13,869	12,809
Tier 2 General Service	9,847	15,038
Total	**$76,586**	**$62,263**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$63,857	$76,586	$12,729

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$697,565	$598,398
▪ Tier 1 General Service	890,116	816,401
▪ Tier 2 Police & Fire	365,264	248,180
▪ Tier 2 General Service	274,154	291,358
▪ **Total Active Members**	**$2,227,099**	**$1,954,337**
Dormant Members	557,885	444,061
Retired Members and Beneficiaries	1,052,049	1,112,192
Total Actuarial Accrued Liability	**$3,837,033**	**$3,510,590**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$3,821,234	$3,837,033	$15,799

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,837,033	$3,510,590
2. Actuarial value of assets	3,582,220	3,132,652
3. Unfunded accrued liability *(1. – 2.)*	254,813	377,938
4. Funded percentage *(2. ÷ 1.)*	93%	89%
5. Combined valuation payroll	$989,332	$877,859
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	26%	43%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$254,813	$18,443
Total				**$254,813**	**$18,443**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$3,510,590
b. Normal cost at December 31, 2011	62,263
c. Benefit payments during 2012	(97,285)
d. Interest at 8.0% to December 31, 2012	281,937
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,757,505
f. Change in actuarial accrued liability due to assumption, method, and plan changes	15,799
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,773,304
2. Actuarial accrued liability at December 31, 2012	3,837,033
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(63,729)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	3,132,652
b. Contributions for 2012[1]	61,881
c. Benefit payments and expenses during 2012	(98,052)
d. Interest at 8.0% to December 31, 2012	249,165
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,345,646
5. Actuarial value of assets at December 31, 2012	3,582,220
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	236,574
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$172,845**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$377,938**
2. Expected increase	33,921
3. Liability (gain)/loss	63,729
4. Asset (gain)/loss	(236,574)
5. Change due to changes in assumptions, methods, and plan provisions	15,799
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$254,813**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$29,620	$169,219	17.50%	$20,860	$162,574	12.83%
Tier 1 General Service	23,250	201,896	11.52%	13,556	191,747	7.07%
Tier 2 Police & Fire	13,869	77,880	17.81%	12,809	76,506	16.74%
Tier 2 General Service	9,847	85,871	11.47%	15,038	121,421	12.39%
Total	**$76,586**	**$534,866**	**14.32%**	**$62,263**	**$552,248**	**11.27%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$254,813	$377,938
2. Next year's Tier 1/Tier 2 UAL payment	18,443	26,175
3. Combined valuation payroll	989,332	877,859
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.86%	2.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.32%	11.27%
b. Tier 1/Tier 2 UAL rate	1.86%	2.98%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.31%	14.38%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.08%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.08%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.22%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	93%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.08%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	14.08%
7. July 1, 2015 total pension rate, before adjustment	16.31%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.23%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.86%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.37%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.08%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.32%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.32%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.08%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.32%	11.27%
b. Tier 1/Tier 2 UAL rate	(0.37%)	2.68%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.08%	14.08%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$201,896	$169,219	$371,115
Tier 2	85,871	77,880	163,751
Tier 1/Tier 2 valuation payroll	287,767	247,099	534,866
OPSRP valuation payroll	195,967	258,499	454,466
Combined valuation payroll	**$483,734**	**$505,598**	**$989,332**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	4	2	5	11	4	3	4	11
Police & Fire	3	2	8	13	3	2	6	11
Total	7	4	13	24	7	5	10	22
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	3	3	N/A	6
Police & Fire	2	2	N/A	4	3	4	N/A	7
Total	2	3	N/A	5	6	7	N/A	13
Dormant Members								
General Service	3	1	0	4	3	0	0	3
Police & Fire	1	0	1	2	1	0	1	2
Total	4	1	1	6	4	0	1	5
Retired Members and Beneficiaries								
General Service	4	2	0	6	4	2	0	6
Police & Fire	5	0	0	5	5	0	0	5
Total	9	2	0	11	9	2	0	11
Grand Total Number of Members	**22**	**10**	**14**	**46**	**26**	**14**	**11**	**51**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							**1**
45-49			1	2	1					**4**
50-54		1		1						**2**
55-59			1	2						**3**
60-64				1						**1**
65-69										
70-74										
75+										
Total	**0**	**1**	**3**	**6**	**1**	**0**	**0**	**0**	**0**	**11**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	1,364
45-49	1	785
50-54		
55-59	1	2,725
60-64	2	396
65-69		
70-74		
75+		
Total	5	1,133

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	594
60-64	3	454
65-69	3	166
70-74	1	1,240
75-79	1	2,509
80-84	1	546
85-89		
90-94		
95-99		
100+		
Total	11	667

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Hillsboro/2115
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Hillsboro/2115

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Hillsboro -- #2115

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Hillsboro to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Hillsboro.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Hillsboro

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.40%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	1.47%	1.47%	1.47%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.47%**	**9.43%**	**13.53%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.03%**	**9.91%**	**14.01%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 85%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.87%	11.87%
Minimum July 1, 2015 Rate	8.87%	5.87%
Maximum July 1, 2015 Rate	14.87%	17.87%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$138,900,828	$129,007,645	($9,893,183)	108%	$39,252,608	(25%)
12/31/2008	106,241,074	134,764,925	28,523,851	79%	42,692,804	67%
12/31/2009	122,679,132	145,509,269	22,830,137	84%	44,456,632	51%
12/31/2010	132,782,298	155,805,361	23,023,063	85%	47,678,323	48%
12/31/2011	131,672,972	163,806,911	32,133,939	80%	49,565,888	65%
12/31/2012	146,542,313	171,483,160	24,940,847	85%	52,063,096	48%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Hillsboro

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$24,940,847	$32,133,939
Allocated pooled OPSRP UAL	3,669,550	845,712
Side account	0	0
Net unfunded pension actuarial accrued liability	28,610,397	32,979,651
Combined valuation payroll	52,063,096	49,565,888
Net pension UAL as a percentage of payroll	55%	67%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,092,306	$1,284,029

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$4,290,311	$3,534,261
Tier 1/Tier 2 valuation payroll	32,018,645	32,238,022
Tier 1/Tier 2 pension normal cost rate	13.40%	10.96%
Tier 1/ Tier 2 Actuarial accrued liability	$171,483,160	$163,806,911
Actuarial asset value	146,542,313	131,672,972
Tier 1/Tier 2 Unfunded actuarial accrued liability	24,940,847	32,133,939
Tier 1/ Tier 2 Funded status	85%	80%
Combined valuation payroll	$52,063,096	$49,565,888
Tier 1/Tier 2 UAL as a percentage of payroll	48%	65%
Tier 1/Tier 2 UAL rate	1.47%	3.91%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	393	414
Tier 1/Tier 2 dormant members	125	123
Tier 1/Tier 2 retirees and beneficiaries	306	278

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	52,063,096	49,565,888
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$24,393,283	$22,741,754
2. Employer reserves	74,626,520	64,381,713
3. Benefits in force reserve	47,522,510	44,549,505
4. Total market value of assets ***(1. + 2. + 3.)***	**$146,542,313**	**$131,672,972**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$131,672,972
2.	Regular employer contributions	4,065,136
3.	Benefit payments and expenses	(7,463,747)
4.	Adjustments[2]	495,241
5.	Interest credited	17,772,711
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$146,542,313**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$965,301	$863,955
Tier 1 General Service	1,045,281	511,602
Tier 2 Police & Fire	1,212,192	1,122,356
Tier 2 General Service	1,067,537	1,036,348
Total	**$4,290,311**	**$3,534,261**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$3,693,978	$4,290,311	$596,333

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$25,887,555	$23,013,409
▪ Tier 1 General Service	23,808,447	26,772,673
▪ Tier 2 Police & Fire	17,265,210	12,318,416
▪ Tier 2 General Service	17,990,694	13,867,308
▪ **Total Active Members**	**$84,951,906**	**$75,971,806**
Dormant Members	6,449,262	6,811,309
Retired Members and Beneficiaries	80,081,992	81,023,796
Total Actuarial Accrued Liability	**$171,483,160**	**$163,806,911**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$174,691,991	$171,483,160	($3,208,831)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$171,483,160	$163,806,911
2. Actuarial value of assets	146,542,313	131,672,972
3. Unfunded accrued liability *(1. – 2.)*	24,940,847	32,133,939
4. Funded percentage *(2. ÷ 1.)*	85%	80%
5. Combined valuation payroll	$52,063,096	$49,565,888
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	48%	65%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$24,940,847	$1,805,215
Total				**$24,940,847**	**$1,805,215**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$163,806,911
b. Normal cost at December 31, 2011	3,534,261
c. Benefit payments during 2012	(7,405,322)
d. Interest at 8.0% to December 31, 2012	13,091,081
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	173,026,931
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(3,208,831)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	169,818,100
2. Actuarial accrued liability at December 31, 2012	171,483,160
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,665,060)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	131,672,972
b. Contributions for 2012[1]	4,065,136
c. Benefit payments and expenses during 2012	(7,463,747)
d. Interest at 8.0% to December 31, 2012	10,397,893
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	138,672,255
5. Actuarial value of assets at December 31, 2012	146,542,313
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	7,870,058
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$6,204,998**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$32,133,939**
2. Expected increase	2,220,737
3. Liability (gain)/loss	1,665,060
4. Asset (gain)/loss	(7,870,058)
5. Change due to changes in assumptions, methods, and plan provisions	(3,208,831)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$24,940,847**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$965,301	$5,767,951	16.74%	$863,955	$5,651,110	15.29%
Tier 1 General Service	1,045,281	7,450,272	14.03%	511,602	7,883,507	6.49%
Tier 2 Police & Fire	1,212,192	8,237,235	14.72%	1,122,356	7,947,251	14.12%
Tier 2 General Service	1,067,537	10,563,187	10.11%	1,036,348	10,756,154	9.63%
Total	**$4,290,311**	**$32,018,645**	**13.40%**	**$3,534,261**	**$32,238,022**	**10.96%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$24,940,847	$32,133,939
2. Next year's Tier 1/Tier 2 UAL payment	1,805,215	2,408,713
3. Combined valuation payroll	52,063,096	49,565,888
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.47%	4.86%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.40%	10.96%
b. Tier 1/Tier 2 UAL rate	3.47%	4.86%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.00%	15.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.87%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.87%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.37%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	85%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.87%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	14.87%
7. July 1, 2015 total pension rate, before adjustment	17.00%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.13%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	3.47%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.34%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.87%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.40%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.40%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.87%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.40%	10.96%
b. Tier 1/Tier 2 UAL rate	1.34%	3.78%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.87%	14.87%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$7,450,272	$5,767,951	$13,218,223
Tier 2	10,563,187	8,237,235	18,800,422
Tier 1/Tier 2 valuation payroll	18,013,459	14,005,186	32,018,645
OPSRP valuation payroll	14,720,854	5,323,597	20,044,451
Combined valuation payroll	**$32,734,313**	**$19,328,783**	**$52,063,096**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	100	153	317	570	109	161	290	560
Police & Fire	56	84	63	203	58	86	61	205
Total	156	237	380	773	167	247	351	765
Active Members with previous service segments with the employer								
General Service	70	89	N/A	159	91	114	N/A	205
Police & Fire	8	7	N/A	15	10	11	N/A	21
Total	78	96	N/A	174	101	125	N/A	226
Dormant Members								
General Service	52	57	19	128	53	50	9	112
Police & Fire	11	5	5	21	14	6	2	22
Total	63	62	24	149	67	56	11	134
Retired Members and Beneficiaries								
General Service	186	23	2	211	172	15	1	188
Police & Fire	87	10	1	98	83	8	1	92
Total	273	33	3	309	255	23	2	280
Grand Total Number of Members	**570**	**428**	**407**	**1,405**	**590**	**451**	**364**	**1,405**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29	1									1
30-34	1	9	8	1						19
35-39		9	41	5						55
40-44		5	39	23	9					76
45-49	1	2	32	32	18					85
50-54		2	19	16	14	7	3			61
55-59			15	14	8	5	5			47
60-64		1	18	11	11	1		1		43
65-69			1	2	2			1		6
70-74										
75+										
Total	3	28	173	104	62	13	8	2	0	393

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29	1	0
30-34	2	716
35-39	12	264
40-44	19	808
45-49	22	270
50-54	26	914
55-59	20	712
60-64	11	372
65-69	10	347
70-74	1	180
75+	1	541
Total	125	577

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	4	1,880
45-49	2	1,603
50-54	21	2,572
55-59	36	2,067
60-64	91	2,058
65-69	66	1,873
70-74	42	1,233
75-79	21	1,283
80-84	13	1,166
85-89	9	936
90-94		
95-99	1	399
100+		
Total	306	1,806

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Helix/2210
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Helix/2210

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Helix/2210

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Helix -- #2210

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Helix to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Helix.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Helix

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.20%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(1.05%)	(1.05%)	(1.05%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**10.75%**	**6.91%**	**11.01%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**11.31%**	**7.39%**	**11.49%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 105%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	7.15%	7.15%
Minimum July 1, 2015 Rate	4.15%	1.15%
Maximum July 1, 2015 Rate	10.15%	13.15%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$108,854	$67,930	($40,924)	160%	$30,075	(136%)
12/31/2008	76,476	76,151	(325)	100%	31,023	(1%)
12/31/2009	88,754	81,883	(6,871)	108%	32,415	(21%)
12/31/2010	97,418	87,836	(9,582)	111%	33,907	(28%)
12/31/2011	98,078	94,599	(3,479)	104%	34,741	(10%)
12/31/2012	111,566	106,424	(5,142)	105%	35,461	(15%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Helix

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($5,142)	($3,479)
Allocated pooled OPSRP UAL	2,499	593
Side account	0	0
Net unfunded pension actuarial accrued liability	(2,643)	(2,886)
Combined valuation payroll	35,461	34,741
Net pension UAL as a percentage of payroll	(7%)	(8%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$744	$900

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$3,971	$3,891
Tier 1/Tier 2 valuation payroll	35,461	34,741
Tier 1/Tier 2 pension normal cost rate	11.20%	11.20%
Tier 1/ Tier 2 Actuarial accrued liability	$106,424	$94,599
Actuarial asset value	111,566	98,078
Tier 1/Tier 2 Unfunded actuarial accrued liability	(5,142)	(3,479)
Tier 1/ Tier 2 Funded status	105%	104%
Combined valuation payroll	$35,461	$34,741
Tier 1/Tier 2 UAL as a percentage of payroll	(15%)	(10%)
Tier 1/Tier 2 UAL rate	(1.05%)	(1.55%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	35,461	34,741
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$295	$256
2. Employer reserves	76,293	63,912
3. Benefits in force reserve	34,978	33,911
4. Total market value of assets ***(1. + 2. + 3.)***	**$111,566**	**$98,078**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$98,078
2.	Regular employer contributions	2,829
3.	Benefit payments and expenses	(5,493)
4.	Adjustments [2]	2,101
5.	Interest credited	14,051
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$111,566**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	3,971	3,891
Total	**$3,971**	**$3,891**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,099	$3,971	($128)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	47,482	32,925
▪ **Total Active Members**	**$47,482**	**$32,925**
Dormant Members	0	0
Retired Members and Beneficiaries	58,942	61,674
Total Actuarial Accrued Liability	**$106,424**	**$94,599**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$101,216	$106,424	$5,208

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$106,424	$94,599
2. Actuarial value of assets	111,566	98,078
3. Unfunded accrued liability *(1. – 2.)*	(5,142)	(3,479)
4. Funded percentage *(2. ÷ 1.)*	105%	104%
5. Combined valuation payroll	$35,461	$34,741
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(15%)	(10%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($5,142)	($372)
Total				**($5,142)**	**($372)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$94,599
b. Normal cost at December 31, 2011	3,891
c. Benefit payments during 2012	(5,450)
d. Interest at 8.0% to December 31, 2012	7,661
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	100,701
f. Change in actuarial accrued liability due to assumption, method, and plan changes	5,208
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	105,909
2. Actuarial accrued liability at December 31, 2012	106,424
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(515)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	98,078
b. Contributions for 2012[1]	2,829
c. Benefit payments and expenses during 2012	(5,493)
d. Interest at 8.0% to December 31, 2012	7,740
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	103,154
5. Actuarial value of assets at December 31, 2012	111,566
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	8,412
7. Total actuarial gain/(loss) *(3. + 6.)*	**$7,897**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($3,479)**
2. Expected increase	1,026
3. Liability (gain)/loss	515
4. Asset (gain)/loss	(8,412)
5. Change due to changes in assumptions, methods, and plan provisions	5,208
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**($5,142)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	3,971	35,461	11.20%	3,891	34,741	11.20%
Total	**$3,971**	**$35,461**	**11.20%**	**$3,891**	**$34,741**	**11.20%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($5,142)	($3,479)
2. Next year's Tier 1/Tier 2 UAL payment	(372)	(582)
3. Combined valuation payroll	35,461	34,741
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(1.05%)	(1.68%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.20%	11.20%
b. Tier 1/Tier 2 UAL rate	(1.05%)	(1.68%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.28%	9.65%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	7.15%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	7.15%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.43%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	105%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	4.15%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	10.15%
7. July 1, 2015 total pension rate, before adjustment	10.28%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.13%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(1.05%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.18%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	10.15%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.20%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.20%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.20%	11.20%
b. Tier 1/Tier 2 UAL rate	(1.18%)	(1.68%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	10.15%	9.65%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	35,461	0	35,461
Tier 1/Tier 2 valuation payroll	35,461	0	35,461
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$35,461**	**$0**	**$35,461**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**2**	**1**	**0**	**3**	**2**	**1**	**0**	**3**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54		1								**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	34
70-74	1	336
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	185

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Gresham/2114
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Gresham/2114

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Gresham -- #2114

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Gresham to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gresham.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Gresham

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.47%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.77%)	(0.77%)	(0.77%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	(3.78%)	(3.78%)	(3.78%)
Net pension contribution rate	**11.52%**	**3.41%**	**7.51%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.08%**	**3.89%**	**7.99%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 88%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.70%	11.70%
Minimum July 1, 2015 Rate	8.70%	5.70%
Maximum July 1, 2015 Rate	14.70%	17.70%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$223,854,441	$180,919,700	($42,934,741)	124%	$36,892,332	(116%)
12/31/2008	168,862,078	190,868,772	22,006,694	88%	37,629,676	58%
12/31/2009	189,958,934	203,674,858	13,715,925	93%	37,704,039	36%
12/31/2010	201,010,560	214,467,396	13,456,836	94%	39,906,096	34%
12/31/2011	198,059,438	225,555,045	27,495,606	88%	38,944,096	71%
12/31/2012	217,937,233	227,671,406	9,734,173	96%	39,541,683	25%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Gresham

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$26,571,471	$43,447,228
Allocated pooled OPSRP UAL	2,787,007	664,479
Side account	16,837,297	15,951,622
Net unfunded pension actuarial accrued liability	12,521,181	28,160,085
Combined valuation payroll	39,541,683	38,944,096
Net pension UAL as a percentage of payroll	32%	72%
Calculated side account rate relief	(3.78%)	(3.52%)
Allocated pooled RHIA UAL	$829,601	$1,008,866

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$4,156,817	$3,302,808
Tier 1/Tier 2 valuation payroll	26,870,365	27,373,708
Tier 1/Tier 2 pension normal cost rate	15.47%	12.07%
Tier 1/ Tier 2 Actuarial accrued liability	$227,671,406	$225,555,045
Actuarial asset value	201,099,935	182,107,817
Tier 1/Tier 2 Unfunded actuarial accrued liability	26,571,471	43,447,228
Tier 1/ Tier 2 Funded status	88%	81%
Combined valuation payroll	$39,541,683	$38,944,096
Tier 1/Tier 2 UAL as a percentage of payroll	67%	112%
Tier 1/Tier 2 UAL rate	(0.77%)	2.63%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	319	330
Tier 1/Tier 2 dormant members	120	115
Tier 1/Tier 2 retirees and beneficiaries	380	352

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**	**$15,951,622**	**$15,951,622**
2. Deposits made during 2012		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2012		(1,361,552)	(1,361,552)
5. Side account earnings during 2012		2,248,228	2,248,228
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***		**$16,837,297**	**$16,837,297**

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$16,837,297	$15,951,622
Side account 2	0	0
Side account 3	0	0
Total	**$16,837,297**	**$15,951,622**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$16,837,297	$15,951,622
2. Combined valuation payroll	39,541,683	38,944,096
3. Amortization factor	11.272	11.626
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	(3.78%)	(3.52%)

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$34,510,179	$32,244,516
2. Employer reserves	98,044,299	86,160,808
3. Benefits in force reserve	68,545,457	63,702,493
4. Total market value of assets *(1. + 2. + 3.)*	**$201,099,935**	**$182,107,817**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$182,107,817
2. Regular employer contributions	1,786,566
3. Benefit payments and expenses	(10,765,550)
4. Adjustments[2]	2,442,608
5. Interest credited	24,166,943
6. Total transferred from side accounts	1,361,552
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$201,099,935**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$1,607,512	$1,446,559
Tier 1 General Service	1,091,067	405,771
Tier 2 Police & Fire	832,941	793,794
Tier 2 General Service	625,297	656,684
Total	**$4,156,817**	**$3,302,808**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$3,336,017	$4,156,817	$820,800

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$47,578,806	$46,639,690
▪ Tier 1 General Service	26,468,387	28,994,495
▪ Tier 2 Police & Fire	13,143,029	9,757,589
▪ Tier 2 General Service	11,374,589	9,141,940
▪ **Total Active Members**	**$98,564,811**	**$94,533,714**
Dormant Members	13,598,034	15,163,306
Retired Members and Beneficiaries	115,508,561	115,858,025
Total Actuarial Accrued Liability	**$227,671,406**	**$225,555,045**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$237,107,435	$227,671,406	($9,436,029)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$227,671,406	$225,555,045
2. Actuarial value of assets	201,099,935	182,107,817
3. Unfunded accrued liability *(1. – 2.)*	26,571,471	43,447,228
4. Funded percentage *(2. ÷ 1.)*	88%	81%
5. Combined valuation payroll	$39,541,683	$38,944,096
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	67%	112%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$26,571,471	$1,923,239
Total				**$26,571,471**	**$1,923,239**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$225,555,045
b. Normal cost at December 31, 2011	3,302,808
c. Benefit payments during 2012	(10,681,278)
d. Interest at 8.0% to December 31, 2012	17,881,377
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	236,057,952
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(9,436,029)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	226,621,923
2. Actuarial accrued liability at December 31, 2012	227,671,406
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,049,483)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	182,107,817
b. Contributions for 2012[1]	3,148,118
c. Benefit payments and expenses during 2012	(10,765,550)
d. Interest at 8.0% to December 31, 2012	14,263,928
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	188,754,313
5. Actuarial value of assets at December 31, 2012	201,099,935
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	12,345,622
7. Total actuarial gain/(loss) *(3. + 6.)*	**$11,296,139**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$43,447,228**
2. Expected increase	3,856,411
3. Liability (gain)/loss	1,049,483
4. Asset (gain)/loss	(12,345,622)
5. Change due to changes in assumptions, methods, and plan provisions	(9,436,029)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$26,571,471**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$1,607,512	$8,701,297	18.47%	$1,446,559	$8,763,227	16.51%
Tier 1 General Service	1,091,067	6,815,713	16.01%	405,771	6,878,776	5.90%
Tier 2 Police & Fire	832,941	5,500,693	15.14%	793,794	5,453,370	14.56%
Tier 2 General Service	625,297	5,852,662	10.68%	656,684	6,278,335	10.46%
Total	**$4,156,817**	**$26,870,365**	**15.47%**	**$3,302,808**	**$27,373,708**	**12.07%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$26,571,471	$43,447,228
2. Next year's Tier 1/Tier 2 UAL payment	1,923,239	3,214,614
3. Combined valuation payroll	39,541,683	38,944,096
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.86%	8.25%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.47%	12.07%
b. Tier 1/Tier 2 UAL rate	4.86%	8.25%
c. Multnomah Fire District #10 rate	0.26%	0.26%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.59%	20.58%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.18%
2. Employer contribution rate attributable to side accounts	(3.52%)
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.70%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.34%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	88%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.70%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	14.70%
7. July 1, 2015 total pension rate, before adjustment	20.59%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.89%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.86%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.03%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.70%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.47%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.47%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.70%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.47%	12.07%
b. Tier 1/Tier 2 UAL rate	(1.03%)	2.37%
c. Multnomah Fire District #10 rate	0.26%	0.26%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.70%	14.70%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$6,815,713	$8,701,297	$15,517,010
Tier 2	5,852,662	5,500,693	11,353,355
Tier 1/Tier 2 valuation payroll	12,668,375	14,201,990	26,870,365
OPSRP valuation payroll	7,522,303	5,149,015	12,671,318
Combined valuation payroll	**$20,190,678**	**$19,351,005**	**$39,541,683**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	93	88	121	302	96	92	118	306
Police & Fire	81	57	61	199	84	58	57	199
Total	174	145	182	501	180	150	175	505
Active Members with previous service segments with the employer								
General Service	42	28	N/A	70	50	44	N/A	94
Police & Fire	14	14	N/A	28	16	14	N/A	30
Total	56	42	N/A	98	66	58	N/A	124
Dormant Members								
General Service	58	39	12	109	61	31	5	97
Police & Fire	14	9	1	24	15	8	1	24
Total	72	48	13	133	76	39	6	121
Retired Members and Beneficiaries								
General Service	231	21	0	252	213	16	0	229
Police & Fire	116	12	1	129	111	12	0	123
Total	347	33	1	381	324	28	0	352
Grand Total Number of Members	**649**	**268**	**196**	**1,113**	**646**	**275**	**181**	**1,102**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		2	5							**7**
35-39	1	3	28	2	1					**35**
40-44		5	24	10	5					**44**
45-49		4	25	13	18	10				**70**
50-54		4	9	12	19	21	3			**68**
55-59		1	12	11	12	8	4	1		**49**
60-64		3	12	8	10	5	1	2		**41**
65-69			1	2	1	1				**5**
70-74										
75+										
Total	**1**	**22**	**116**	**58**	**66**	**45**	**8**	**3**	**0**	**319**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	2,113
35-39	12	561
40-44	17	806
45-49	13	2,149
50-54	24	1,587
55-59	33	1,042
60-64	9	1,680
65-69	6	370
70-74	5	487
75+		
Total	120	1,190

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	4	2,115
45-49	1	125
50-54	17	2,789
55-59	43	3,046
60-64	115	2,175
65-69	97	2,099
70-74	55	1,998
75-79	27	1,474
80-84	12	1,139
85-89	4	1,360
90-94	2	816
95-99	3	366
100+		
Total	380	2,137

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Grants Pass/2113
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Grants Pass/2113

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA	Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary	Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Grants Pass -- #2113

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Grants Pass to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Grants Pass.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Grants Pass

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.75%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	5.54%	5.54%	5.54%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**20.89%**	**13.50%**	**17.60%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**21.45%**	**13.98%**	**18.08%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 83%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	16.91%	16.91%
Minimum July 1, 2015 Rate	13.53%	10.15%
Maximum July 1, 2015 Rate	20.29%	23.67%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$52,711,473	$54,238,486	$1,527,013	97%	$11,433,157	13%
12/31/2008	39,663,782	56,472,774	16,808,992	70%	12,515,625	134%
12/31/2009	45,516,785	58,455,182	12,938,397	78%	11,981,543	108%
12/31/2010	49,311,239	61,438,085	12,126,846	80%	12,714,676	95%
12/31/2011	48,845,349	63,743,090	14,897,741	77%	13,468,530	111%
12/31/2012	54,287,992	65,439,529	11,151,537	83%	13,265,839	84%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Grants Pass

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$11,151,537	$14,897,741
Allocated pooled OPSRP UAL	935,013	229,805
Side account	0	0
Net unfunded pension actuarial accrued liability	12,086,550	15,127,546
Combined valuation payroll	13,265,839	13,468,530
Net pension UAL as a percentage of payroll	91%	112%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$278,323	$348,909

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$1,179,963	$1,096,815
Tier 1/Tier 2 valuation payroll	7,999,706	8,849,174
Tier 1/Tier 2 pension normal cost rate	14.75%	12.39%
Tier 1/ Tier 2 Actuarial accrued liability	$65,439,529	$63,743,090
Actuarial asset value	54,287,992	48,845,349
Tier 1/Tier 2 Unfunded actuarial accrued liability	11,151,537	14,897,741
Tier 1/ Tier 2 Funded status	83%	77%
Combined valuation payroll	$13,265,839	$13,468,530
Tier 1/Tier 2 UAL as a percentage of payroll	84%	111%
Tier 1/Tier 2 UAL rate	5.54%	8.83%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	113	123
Tier 1/Tier 2 dormant members	41	32
Tier 1/Tier 2 retirees and beneficiaries	150	143

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	13,265,839	13,468,530
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$9,474,713	$9,109,728
2. Employer reserves	25,141,862	22,157,209
3. Benefits in force reserve	19,671,417	17,578,411
4. Total market value of assets *(1. + 2. + 3.)*	**$54,287,992**	**$48,845,349**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$48,845,349
2.	Regular employer contributions	1,494,564
3.	Benefit payments and expenses	(3,089,536)
4.	Adjustments[2]	489,554
5.	Interest credited	6,548,060
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$54,287,992**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$372,862	$461,663
Tier 1 General Service	256,307	93,067
Tier 2 Police & Fire	304,509	282,132
Tier 2 General Service	246,285	259,953
Total	**$1,179,963**	**$1,096,815**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$1,003,297	$1,179,963	$176,666

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$11,218,991	$12,401,036
▪ Tier 1 General Service	8,474,543	9,573,410
▪ Tier 2 Police & Fire	4,556,440	3,363,141
▪ Tier 2 General Service	4,040,856	3,231,036
▪ **Total Active Members**	**$28,290,830**	**$28,568,623**
Dormant Members	3,999,645	3,203,975
Retired Members and Beneficiaries	33,149,054	31,970,492
Total Actuarial Accrued Liability	**$65,439,529**	**$63,743,090**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$67,147,933	$65,439,529	($1,708,404)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$65,439,529	$63,743,090
2. Actuarial value of assets	54,287,992	48,845,349
3. Unfunded accrued liability *(1. – 2.)*	11,151,537	14,897,741
4. Funded percentage *(2. ÷ 1.)*	83%	77%
5. Combined valuation payroll	$13,265,839	$13,468,530
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	84%	111%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$11,151,537	$807,147
Total				**$11,151,537**	**$807,147**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$63,743,090
b. Normal cost at December 31, 2011	1,096,815
c. Benefit payments during 2012	(3,065,351)
d. Interest at 8.0% to December 31, 2012	5,064,578
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	66,839,132
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,708,404)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	65,130,728
2. Actuarial accrued liability at December 31, 2012	65,439,529
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(308,801)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	48,845,349
b. Contributions for 2012[1]	1,494,564
c. Benefit payments and expenses during 2012	(3,089,536)
d. Interest at 8.0% to December 31, 2012	3,843,829
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	51,094,206
5. Actuarial value of assets at December 31, 2012	54,287,992
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	3,193,785
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$2,884,984**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$14,897,741**
2. Expected increase	847,184
3. Liability (gain)/loss	308,801
4. Asset (gain)/loss	(3,193,785)
5. Change due to changes in assumptions, methods, and plan provisions	(1,708,404)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$11,151,537**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$372,862	$2,119,243	17.59%	$461,663	$2,423,085	19.05%
Tier 1 General Service	256,307	1,583,093	16.19%	93,067	1,852,280	5.02%
Tier 2 Police & Fire	304,509	2,023,700	15.05%	282,132	2,000,786	14.10%
Tier 2 General Service	246,285	2,273,670	10.83%	259,953	2,573,023	10.10%
Total	**$1,179,963**	**$7,999,706**	**14.75%**	**$1,096,815**	**$8,849,174**	**12.39%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$11,151,537	$14,897,741
2. Next year's Tier 1/Tier 2 UAL payment	807,147	1,171,310
3. Combined valuation payroll	13,265,839	13,468,530
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.08%	8.70%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.75%	12.39%
b. Tier 1/Tier 2 UAL rate	6.08%	8.70%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.96%	21.22%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	16.91%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	16.91%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.38%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.38%
c. Funded percentage	83%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.38%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	13.53%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	20.29%
7. July 1, 2015 total pension rate, before adjustment	20.96%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.67%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.08%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	5.41%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	20.29%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.75%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.75%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	20.29%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.75%	12.39%
b. Tier 1/Tier 2 UAL rate	5.41%	8.70%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	20.29%	21.22%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,583,093	$2,119,243	$3,702,336
Tier 2	2,273,670	2,023,700	4,297,370
Tier 1/Tier 2 valuation payroll	3,856,763	4,142,943	7,999,706
OPSRP valuation payroll	3,077,112	2,189,021	5,266,133
Combined valuation payroll	**$6,933,875**	**$6,331,964**	**$13,265,839**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	24	43	62	129	29	46	56	131
Police & Fire	23	23	30	76	26	22	25	73
Total	47	66	92	205	55	68	81	204
Active Members with previous service segments with the employer								
General Service	8	2	N/A	10	21	9	N/A	30
Police & Fire	13	8	N/A	21	16	13	N/A	29
Total	21	10	N/A	31	37	22	N/A	59
Dormant Members								
General Service	15	15	4	34	13	11	3	27
Police & Fire	8	3	0	11	6	2	0	8
Total	23	18	4	45	19	13	3	35
Retired Members and Beneficiaries								
General Service	82	11	1	94	79	10	0	89
Police & Fire	56	1	0	57	54	0	0	54
Total	138	12	1	151	133	10	0	143
Grand Total Number of Members	**229**	**106**	**97**	**432**	**244**	**113**	**84**	**441**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		4	8							**12**
35-39		2	8	1						**11**
40-44		3	7	9	1					**20**
45-49		2	7	6	5	1				**21**
50-54			3	7	7	3				**20**
55-59		1	3	4	5	3				**16**
60-64		1	6			3	1	1		**12**
65-69						1				**1**
70-74										
75+										
Total	**0**	**13**	**42**	**27**	**18**	**11**	**1**	**1**	**0**	**113**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	2	630
40-44	8	1,310
45-49	8	1,018
50-54	11	1,007
55-59	10	2,623
60-64	1	619
65-69	1	328
70-74		
75+		
Total	41	1,418

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	10	2,117
55-59	11	1,187
60-64	27	2,344
65-69	42	1,665
70-74	19	1,424
75-79	20	1,632
80-84	11	894
85-89	7	766
90-94	1	453
95-99	2	60
100+		
Total	150	1,619

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Gold Beach/2250
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Gold Beach/2250

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Gold Beach/2250

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA	Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary	Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Gold Beach -- #2250

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Gold Beach to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gold Beach.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Gold Beach

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.07%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	2.13%	2.13%	2.13%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.80%**	**10.09%**	**14.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.36%**	**10.57%**	**14.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 93%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.78%	14.78%
Minimum July 1, 2015 Rate	11.78%	8.78%
Maximum July 1, 2015 Rate	17.78%	20.78%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,640,725	$2,573,049	($67,676)	103%	$468,729	(14%)
12/31/2008	2,042,171	2,715,082	672,911	75%	553,062	122%
12/31/2009	2,363,600	2,799,170	435,570	84%	540,045	81%
12/31/2010	2,416,858	2,808,705	391,847	86%	665,234	59%
12/31/2011	2,267,242	2,685,284	418,042	84%	725,790	58%
12/31/2012	2,589,998	2,775,002	185,004	93%	668,568	28%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Gold Beach

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$185,004	$418,042
Allocated pooled OPSRP UAL	47,123	12,384
Side account	0	0
Net unfunded pension actuarial accrued liability	232,127	430,426
Combined valuation payroll	668,568	725,790
Net pension UAL as a percentage of payroll	35%	59%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$14,027	$18,802

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$54,481	$51,905
Tier 1/Tier 2 valuation payroll	416,880	409,121
Tier 1/Tier 2 pension normal cost rate	13.07%	12.69%
Tier 1/ Tier 2 Actuarial accrued liability	$2,775,002	$2,685,284
Actuarial asset value	2,589,998	2,267,242
Tier 1/Tier 2 Unfunded actuarial accrued liability	185,004	418,042
Tier 1/ Tier 2 Funded status	93%	84%
Combined valuation payroll	$668,568	$725,790
Tier 1/Tier 2 UAL as a percentage of payroll	28%	58%
Tier 1/Tier 2 UAL rate	2.13%	4.59%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	8	8
Tier 1/Tier 2 dormant members	3	6
Tier 1/Tier 2 retirees and beneficiaries	22	20

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	668,568	725,790
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$353,087	$319,101
2. Employer reserves	1,368,672	1,123,215
3. Benefits in force reserve	868,239	824,926
4. Total market value of assets *(1. + 2. + 3.)*	**$2,589,998**	**$2,267,242**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$2,267,242
2.	Regular employer contributions	90,066
3.	Benefit payments and expenses	(136,363)
4.	Adjustments [2]	55,454
5.	Interest credited	313,598
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,589,998**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$11,052	$11,303
Tier 1 General Service	14,190	12,668
Tier 2 Police & Fire	14,863	12,776
Tier 2 General Service	14,376	15,158
Total	**$54,481**	**$51,905**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$55,382	$54,481	($901)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$338,762	$315,065
▪ Tier 1 General Service	246,909	204,589
▪ Tier 2 Police & Fire	211,685	171,704
▪ Tier 2 General Service	213,314	155,859
▪ **Total Active Members**	**$1,010,670**	**$847,217**
Dormant Members	301,230	337,744
Retired Members and Beneficiaries	1,463,102	1,500,323
Total Actuarial Accrued Liability	**$2,775,002**	**$2,685,284**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$2,785,705	$2,775,002	($10,703)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$2,775,002	$2,685,284
2. Actuarial value of assets	2,589,998	2,267,242
3. Unfunded accrued liability *(1. – 2.)*	185,004	418,042
4. Funded percentage *(2. ÷ 1.)*	93%	84%
5. Combined valuation payroll	$668,568	$725,790
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	28%	58%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$185,004	$13,391
Total				**$185,004**	**$13,391**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$2,685,284
b. Normal cost at December 31, 2011	51,905
c. Benefit payments during 2012	(135,296)
d. Interest at 8.0% to December 31, 2012	213,563
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	2,815,456
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(10,703)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	2,804,753
2. Actuarial accrued liability at December 31, 2012	2,775,002
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	29,751
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,267,242
b. Contributions for 2012[1]	90,066
c. Benefit payments and expenses during 2012	(136,363)
d. Interest at 8.0% to December 31, 2012	179,527
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,400,473
5. Actuarial value of assets at December 31, 2012	2,589,998
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	189,525
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$219,276**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$418,042**
2. Expected increase	(3,059)
3. Liability (gain)/loss	(29,751)
4. Asset (gain)/loss	(189,525)
5. Change due to changes in assumptions, methods, and plan provisions	(10,703)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$185,004**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$11,052	$59,809	18.48%	$11,303	$60,233	18.77%
Tier 1 General Service	14,190	129,414	10.96%	12,668	117,104	10.82%
Tier 2 Police & Fire	14,863	92,259	16.11%	12,776	94,375	13.54%
Tier 2 General Service	14,376	135,398	10.62%	15,158	137,409	11.03%
Total	**$54,481**	**$416,880**	**13.07%**	**$51,905**	**$409,121**	**12.69%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$185,004	$418,042
2. Next year's Tier 1/Tier 2 UAL payment	13,391	32,359
3. Combined valuation payroll	668,568	725,790
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.00%	4.46%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.07%	12.69%
b. Tier 1/Tier 2 UAL rate	2.00%	4.46%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.20%	17.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.78%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.78%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.96%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	93%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.78%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.78%
7. July 1, 2015 total pension rate, before adjustment	15.20%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.00%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.00%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	15.20%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.07%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.07%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.20%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.07%	12.69%
b. Tier 1/Tier 2 UAL rate	2.00%	4.46%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	15.20%	17.28%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$129,414	$59,809	$189,223
Tier 2	135,398	92,259	227,657
Tier 1/Tier 2 valuation payroll	264,812	152,068	416,880
OPSRP valuation payroll	178,550	73,138	251,688
Combined valuation payroll	**$443,362**	**$225,206**	**$668,568**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	3	6	11	2	3	7	12
Police & Fire	1	2	2	5	1	2	2	5
Total	3	5	8	16	3	5	9	17
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	2	0	N/A	2
Police & Fire	1	1	N/A	2	1	2	N/A	3
Total	1	1	N/A	2	3	2	N/A	5
Dormant Members								
General Service	2	0	0	2	3	0	0	3
Police & Fire	1	0	1	2	1	2	1	4
Total	3	0	1	4	4	2	1	7
Retired Members and Beneficiaries								
General Service	8	0	0	8	7	0	0	7
Police & Fire	13	1	0	14	13	0	0	13
Total	21	1	0	22	20	0	0	20
Grand Total Number of Members	**28**	**7**	**9**	**44**	**30**	**9**	**10**	**49**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							1
40-44		1			1					2
45-49			1	1	1					3
50-54			1	1						2
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**1**	**3**	**2**	**2**	**0**	**0**	**0**	**0**	**8**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	3,637
50-54		
55-59	2	111
60-64		
65-69		
70-74		
75+		
Total	3	1,286

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	373
60-64	6	415
65-69	3	642
70-74	7	598
75-79	4	495
80-84		
85-89		
90-94		
95-99		
100+		
Total	22	515

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Gervais/2264
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
City of Gervais/2264

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Gervais/2264

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Gervais -- #2264

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Gervais to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gervais.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Gervais

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.03%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	1.02%	1.02%	1.02%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.65%**	**8.98%**	**13.08%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.21%**	**9.46%**	**13.56%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 87%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.05%	10.05%
Minimum July 1, 2015 Rate	7.05%	4.05%
Maximum July 1, 2015 Rate	13.05%	16.05%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$963,839	$724,739	($239,100)	133%	$256,878	(93%)
12/31/2008	739,278	786,181	46,903	94%	347,867	13%
12/31/2009	860,297	931,540	71,243	92%	392,434	18%
12/31/2010	908,919	1,046,214	137,295	87%	365,611	38%
12/31/2011	925,700	1,131,043	205,343	82%	365,206	56%
12/31/2012	1,033,510	1,188,572	155,062	87%	548,250	28%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Gervais

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$155,062	$205,343
Allocated pooled OPSRP UAL	38,642	6,231
Side account	0	0
Net unfunded pension actuarial accrued liability	193,704	211,574
Combined valuation payroll	548,250	365,206
Net pension UAL as a percentage of payroll	35%	58%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$11,503	$9,461

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$23,639	$24,220
Tier 1/Tier 2 valuation payroll	196,576	197,773
Tier 1/Tier 2 pension normal cost rate	12.03%	12.25%
Tier 1/ Tier 2 Actuarial accrued liability	$1,188,572	$1,131,043
Actuarial asset value	1,033,510	925,700
Tier 1/Tier 2 Unfunded actuarial accrued liability	155,062	205,343
Tier 1/ Tier 2 Funded status	87%	82%
Combined valuation payroll	$548,250	$365,206
Tier 1/Tier 2 UAL as a percentage of payroll	28%	56%
Tier 1/Tier 2 UAL rate	1.02%	0.80%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	4	4
Tier 1/Tier 2 dormant members	2	3
Tier 1/Tier 2 retirees and beneficiaries	6	6

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	548,250	365,206
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$175,288	$156,835
2. Employer reserves	641,154	552,365
3. Benefits in force reserve	217,069	216,500
4. Total market value of assets *(1. + 2. + 3.)*	**$1,033,510**	**$925,700**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$925,700
2. Regular employer contributions	14,799
3. Benefit payments and expenses	(34,092)
4. Adjustments[2]	4,129
5. Interest credited	122,974
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$1,033,510**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$8,835	$9,650
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	14,804	14,570
Total	**$23,639**	**$24,220**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$24,242	$23,639	($603)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$513,170	$446,038
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	43,567	29,225
▪ Tier 2 General Service	174,094	126,518
▪ **Total Active Members**	**$730,831**	**$601,781**
Dormant Members	91,950	135,505
Retired Members and Beneficiaries	365,791	393,757
Total Actuarial Accrued Liability	**$1,188,572**	**$1,131,043**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,153,557	$1,188,572	$35,015

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,188,572	$1,131,043
2. Actuarial value of assets	1,033,510	925,700
3. Unfunded accrued liability *(1. – 2.)*	155,062	205,343
4. Funded percentage *(2. ÷ 1.)*	87%	82%
5. Combined valuation payroll	$548,250	$365,206
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	28%	56%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$155,062	$11,223
Total				**$155,062**	**$11,223**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,131,043
b. Normal cost at December 31, 2011	24,220
c. Benefit payments during 2012	(33,825)
d. Interest at 8.0% to December 31, 2012	91,068
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,212,506
f. Change in actuarial accrued liability due to assumption, method, and plan changes	35,015
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,247,521
2. Actuarial accrued liability at December 31, 2012	1,188,572
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	58,949
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	925,700
b. Contributions for 2012[1]	14,799
c. Benefit payments and expenses during 2012	(34,092)
d. Interest at 8.0% to December 31, 2012	73,284
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	979,692
5. Actuarial value of assets at December 31, 2012	1,033,510
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	53,818
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$112,767**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$205,343**
2. Expected increase	27,471
3. Liability (gain)/loss	(58,949)
4. Asset (gain)/loss	(53,818)
5. Change due to changes in assumptions, methods, and plan provisions	35,015
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$155,062**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$8,835	$53,607	16.48%	$9,650	$62,112	15.54%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	14,804	142,969	10.35%	14,570	135,661	10.74%
Total	**$23,639**	**$196,576**	**12.03%**	**$24,220**	**$197,773**	**12.25%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$155,062	$205,343
2. Next year's Tier 1/Tier 2 UAL payment	11,223	13,752
3. Combined valuation payroll	548,250	365,206
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.05%	3.77%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.03%	12.25%
b. Tier 1/Tier 2 UAL rate	2.05%	3.77%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.21%	16.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.05%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.05%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.01%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	87%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.05%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.05%
7. July 1, 2015 total pension rate, before adjustment	14.21%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.16%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.05%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.89%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.05%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.03%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.03%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.05%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.03%	12.25%
b. Tier 1/Tier 2 UAL rate	0.89%	0.67%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.05%	13.05%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$53,607	$53,607
Tier 2	142,969	0	142,969
Tier 1/Tier 2 valuation payroll	142,969	53,607	196,576
OPSRP valuation payroll	207,822	143,852	351,674
Combined valuation payroll	**$350,791**	**$197,459**	**$548,250**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	3	4	7	0	3	3	6
Police & Fire	1	0	3	4	1	0	2	3
Total	1	3	7	11	1	3	5	9
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	2	1	N/A	3	5	1	N/A	6
Total	2	1	N/A	3	5	1	N/A	6
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	0	0	2	3	0	0	3
Total	2	0	0	2	3	0	0	3
Retired Members and Beneficiaries								
General Service	4	1	0	5	4	1	0	5
Police & Fire	1	0	0	1	1	0	0	1
Total	5	1	0	6	5	1	0	6
Grand Total Number of Members	**10**	**5**	**7**	**22**	**14**	**5**	**5**	**24**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							**1**
40-44				1						**1**
45-49										
50-54			1							**1**
55-59			1							**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**4**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	129
50-54		
55-59	1	537
60-64		
65-69		
70-74		
75+		
Total	2	333

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	593
60-64	1	775
65-69	1	176
70-74	1	421
75-79	1	100
80-84		
85-89		
90-94		
95-99		
100+		
Total	6	443

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Gearhart/2309
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Gearhart/2309

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Gearhart/2309

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

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The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Gearhart -- #2309

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Gearhart to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gearhart.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Gearhart

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.99%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(3.28%)	(3.28%)	(3.28%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.31%**	**4.68%**	**8.78%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.87%**	**5.16%**	**9.26%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 92%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,608,557	$991,482	($617,075)	162%	$336,530	(183%)
12/31/2008	1,171,373	1,096,661	(74,712)	107%	381,660	(20%)
12/31/2009	1,341,751	1,213,117	(128,634)	111%	436,516	(29%)
12/31/2010	1,485,727	1,457,065	(28,662)	102%	423,943	(7%)
12/31/2011	1,434,130	1,606,043	171,913	89%	386,443	44%
12/31/2012	1,613,357	1,749,495	136,138	92%	519,547	26%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Gearhart

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$136,138	$171,913
Allocated pooled OPSRP UAL	36,619	6,594
Side account	0	0
Net unfunded pension actuarial accrued liability	172,757	178,507
Combined valuation payroll	519,547	386,443
Net pension UAL as a percentage of payroll	33%	46%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$10,900	$10,011

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$43,371	$43,366
Tier 1/Tier 2 valuation payroll	289,257	271,508
Tier 1/Tier 2 pension normal cost rate	14.99%	15.97%
Tier 1/ Tier 2 Actuarial accrued liability	$1,749,495	$1,606,043
Actuarial asset value	1,613,357	1,434,130
Tier 1/Tier 2 Unfunded actuarial accrued liability	136,138	171,913
Tier 1/ Tier 2 Funded status	92%	89%
Combined valuation payroll	$519,547	$386,443
Tier 1/Tier 2 UAL as a percentage of payroll	26%	44%
Tier 1/Tier 2 UAL rate	(3.28%)	(4.26%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	4	4
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	519,547	386,443
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$108,903	$94,523
2. Employer reserves	1,132,631	979,380
3. Benefits in force reserve	371,823	360,227
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,613,357**	**$1,434,130**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$1,434,130
2.	Regular employer contributions	11,479
3.	Benefit payments and expenses	(58,398)
4.	Adjustments[2]	26,312
5.	Interest credited	199,833
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,613,357**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$25,553	$27,477
Tier 1 General Service	0	0
Tier 2 Police & Fire	12,795	12,751
Tier 2 General Service	5,023	3,138
Total	**$43,371**	**$43,366**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$46,761	$43,371	($3,390)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$846,730	$746,285
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	185,145	156,915
▪ Tier 2 General Service	91,046	47,686
▪ **Total Active Members**	**$1,122,921**	**$950,886**
Dormant Members	0	0
Retired Members and Beneficiaries	626,574	655,157
Total Actuarial Accrued Liability	**$1,749,495**	**$1,606,043**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,716,855	$1,749,495	$32,640

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,749,495	$1,606,043
2. Actuarial value of assets	1,613,357	1,434,130
3. Unfunded accrued liability *(1. – 2.)*	136,138	171,913
4. Funded percentage *(2. ÷ 1.)*	92%	89%
5. Combined valuation payroll	$519,547	$386,443
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	26%	44%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$136,138	$9,854
Total				**$136,138**	**$9,854**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,606,043
b. Normal cost at December 31, 2011	43,366
c. Benefit payments during 2012	(57,940)
d. Interest at 8.0% to December 31, 2012	129,635
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,721,104
f. Change in actuarial accrued liability due to assumption, method, and plan changes	32,640
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,753,744
2. Actuarial accrued liability at December 31, 2012	1,749,495
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	4,249
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,434,130
b. Contributions for 2012[1]	11,479
c. Benefit payments and expenses during 2012	(58,398)
d. Interest at 8.0% to December 31, 2012	112,854
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,500,065
5. Actuarial value of assets at December 31, 2012	1,613,357
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	113,291
7. Total actuarial gain/(loss) *(3. + 6.)*	**$117,540**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$171,913**
2. Expected increase	49,125
3. Liability (gain)/loss	(4,249)
4. Asset (gain)/loss	(113,291)
5. Change due to changes in assumptions, methods, and plan provisions	32,640
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$136,138**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$25,553	$162,762	15.70%	$27,477	$154,390	17.80%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	12,795	69,990	18.28%	12,751	68,195	18.70%
Tier 2 General Service	5,023	56,505	8.89%	3,138	48,923	6.41%
Total	**$43,371**	**$289,257**	**14.99%**	**$43,366**	**$271,508**	**15.97%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$136,138	$171,913
2. Next year's Tier 1/Tier 2 UAL payment	9,854	8,003
3. Combined valuation payroll	519,547	386,443
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.90%	2.07%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.99%	15.97%
b. Tier 1/Tier 2 UAL rate	1.90%	2.07%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.02%	18.17%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	92%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	17.02%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.31%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.90%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.41%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.71%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.99%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.99%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.99%	15.97%
b. Tier 1/Tier 2 UAL rate	(3.41%)	(4.39%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.71%	11.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$162,762	$162,762
Tier 2	56,505	69,990	126,495
Tier 1/Tier 2 valuation payroll	56,505	232,752	289,257
OPSRP valuation payroll	182,485	47,805	230,290
Combined valuation payroll	**$238,990**	**$280,557**	**$519,547**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	4	5	0	1	2	3
Police & Fire	2	1	1	4	2	1	1	4
Total	2	2	5	9	2	2	3	7
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**4**	**2**	**5**	**11**	**4**	**2**	**3**	**9**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							**1**
40-44				1						**1**
45-49										
50-54										
55-59			1			1				**2**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**2**	**1**	**0**	**1**	**0**	**0**	**0**	**4**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	1,686
65-69	1	2,249
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	1,968

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Fossil/2248
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Fossil/2248

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Fossil/2248

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Fossil -- #2248

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Fossil to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Fossil.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Fossil

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.24%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.83%)	(2.83%)	(2.83%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**5.13%**	**9.23%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**5.61%**	**9.71%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 89%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$595,134	$494,230	($100,904)	120%	$72,991	(138%)
12/31/2008	477,376	528,356	50,980	90%	74,613	68%
12/31/2009	538,898	546,282	7,384	99%	77,993	9%
12/31/2010	587,887	578,730	(9,157)	102%	80,610	(11%)
12/31/2011	579,010	654,449	75,439	88%	94,788	80%
12/31/2012	499,500	562,282	62,782	89%	69,765	90%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Fossil

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$62,782	$75,439
Allocated pooled OPSRP UAL	4,917	1,617
Side account	0	0
Net unfunded pension actuarial accrued liability	67,699	77,056
Combined valuation payroll	69,765	94,788
Net pension UAL as a percentage of payroll	97%	81%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,464	$2,456

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$4,261	$4,605
Tier 1/Tier 2 valuation payroll	37,903	80,458
Tier 1/Tier 2 pension normal cost rate	11.24%	5.72%
Tier 1/ Tier 2 Actuarial accrued liability	$562,282	$654,449
Actuarial asset value	499,500	579,010
Tier 1/Tier 2 Unfunded actuarial accrued liability	62,782	75,439
Tier 1/ Tier 2 Funded status	89%	88%
Combined valuation payroll	$69,765	$94,788
Tier 1/Tier 2 UAL as a percentage of payroll	90%	80%
Tier 1/Tier 2 UAL rate	(2.83%)	2.69%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	2
Tier 1/Tier 2 dormant members	4	4
Tier 1/Tier 2 retirees and beneficiaries	4	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	69,765	94,788
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$60,959	$141,868
2. Employer reserves	216,626	289,594
3. Benefits in force reserve	221,914	147,548
4. Total market value of assets ***(1. + 2. + 3.)***	**$499,500**	**$579,010**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$579,010
2.	Regular employer contributions	3,143
3.	Benefit payments and expenses	(34,853)
4.	Adjustments [2]	(110,634)
5.	Interest credited	62,834
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$499,500**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	4,261	4,605
Total	**$4,261**	**$4,605**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$4,730	$4,261	($469)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	215,379
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	54,811	38,354
▪ **Total Active Members**	**$54,811**	**$253,733**
Dormant Members	133,514	132,364
Retired Members and Beneficiaries	373,957	268,352
Total Actuarial Accrued Liability	**$562,282**	**$654,449**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$579,372	$562,282	($17,090)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$562,282	$654,449
2. Actuarial value of assets	499,500	579,010
3. Unfunded accrued liability *(1. – 2.)*	62,782	75,439
4. Funded percentage *(2. ÷ 1.)*	89%	88%
5. Combined valuation payroll	$69,765	$94,788
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	90%	80%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$62,782	$4,544
Total				**$62,782**	**$4,544**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$654,449
b. Normal cost at December 31, 2011	4,605
c. Benefit payments during 2012	(34,580)
d. Interest at 8.0% to December 31, 2012	51,341
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	675,815
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(17,090)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	658,725
2. Actuarial accrued liability at December 31, 2012	562,282
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	96,443
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	579,010
b. Contributions for 2012[1]	3,143
c. Benefit payments and expenses during 2012	(34,853)
d. Interest at 8.0% to December 31, 2012	45,052
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	592,352
5. Actuarial value of assets at December 31, 2012	499,500
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(92,852)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$3,591**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$75,439**
2. Expected increase	8,024
3. Liability (gain)/loss	(96,443)
4. Asset (gain)/loss	92,852
5. Change due to changes in assumptions, methods, and plan provisions	(17,090)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$62,782**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	42,494	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	4,261	37,903	11.24%	4,605	37,964	12.13%
Total	**$4,261**	**$37,903**	**11.24%**	**$4,605**	**$80,458**	**5.72%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$62,782	$75,439
2. Next year's Tier 1/Tier 2 UAL payment	4,544	4,709
3. Combined valuation payroll	69,765	94,788
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.51%	4.97%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.24%	5.72%
b. Tier 1/Tier 2 UAL rate	6.51%	4.97%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.88%	10.82%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	89%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	17.88%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(9.47%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.51%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.96%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.24%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.24%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.24%	5.72%
b. Tier 1/Tier 2 UAL rate	(2.96%)	2.56%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	8.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	37,903	0	37,903
Tier 1/Tier 2 valuation payroll	37,903	0	37,903
OPSRP valuation payroll	31,862	0	31,862
Combined valuation payroll	**$69,765**	**$0**	**$69,765**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	1	2	1	1	1	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	1	2	1	1	1	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	4	0	0	4	4	0	0	4
Police & Fire	0	0	0	0	0	0	0	0
Total	4	0	0	4	4	0	0	4
Retired Members and Beneficiaries								
General Service	4	0	0	4	3	0	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	4	0	0	4	3	0	0	3
Grand Total Number of Members	**8**	**1**	**1**	**10**	**8**	**1**	**1**	**10**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54		1								**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	2	258
60-64	1	418
65-69		
70-74	1	25
75+		
Total	4	240

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	501
60-64	1	781
65-69		
70-74		
75-79	2	785
80-84		
85-89		
90-94		
95-99		
100+		
Total	4	713

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Eugene/2111
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
City of Eugene/2111

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Eugene/2111

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Eugene -- #2111

Secondary Employers

2141 City Of Eugene Public Library

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Eugene to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Eugene.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Eugene

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.96%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	1.40%	1.40%	1.40%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.96%**	**9.36%**	**13.46%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.52%**	**9.84%**	**13.94%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 91%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.36%	13.36%
Minimum July 1, 2015 Rate	10.36%	7.36%
Maximum July 1, 2015 Rate	16.36%	19.36%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$680,846,717	$612,554,606	($68,292,111)	111%	$85,563,475	(80%)
12/31/2008	511,725,377	636,242,912	124,517,535	80%	87,775,282	142%
12/31/2009	572,595,446	664,728,789	92,133,343	86%	89,005,209	104%
12/31/2010	608,092,209	692,573,860	84,481,651	88%	92,340,211	91%
12/31/2011	592,998,990	719,826,602	126,827,612	82%	95,549,026	133%
12/31/2012	647,467,866	707,760,655	60,292,789	91%	94,530,650	64%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Eugene

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$60,292,789	$126,827,612
Allocated pooled OPSRP UAL	6,662,780	1,630,293
Side account	0	0
Net unfunded pension actuarial accrued liability	66,955,569	128,457,905
Combined valuation payroll	94,530,650	95,549,026
Net pension UAL as a percentage of payroll	71%	134%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,983,293	$2,475,246

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$9,393,017	$7,382,877
Tier 1/Tier 2 valuation payroll	62,792,186	67,033,298
Tier 1/Tier 2 pension normal cost rate	14.96%	11.01%
Tier 1/ Tier 2 Actuarial accrued liability	$707,760,655	$719,826,602
Actuarial asset value	647,467,866	592,998,990
Tier 1/Tier 2 Unfunded actuarial accrued liability	60,292,789	126,827,612
Tier 1/ Tier 2 Funded status	91%	82%
Combined valuation payroll	$94,530,650	$95,549,026
Tier 1/Tier 2 UAL as a percentage of payroll	64%	133%
Tier 1/Tier 2 UAL rate	1.40%	5.35%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	872	922
Tier 1/Tier 2 dormant members	388	396
Tier 1/Tier 2 retirees and beneficiaries	1,390	1,298

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	94,530,650	95,549,026
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$87,252,687	$84,184,525
2. Employer reserves	298,582,146	264,049,109
3. Benefits in force reserve	261,633,032	244,765,356
4. Total market value of assets ***(1. + 2. + 3.)***	**$647,467,866**	**$592,998,990**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$592,998,990
2.	Regular employer contributions	9,159,765
3.	Benefit payments and expenses	(41,091,323)
4.	Adjustments[2]	7,905,111
5.	Interest credited	78,495,322
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$647,467,866**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$2,205,997	$2,241,982
Tier 1 General Service	3,433,459	1,349,335
Tier 2 Police & Fire	1,762,208	1,677,660
Tier 2 General Service	1,991,353	2,113,900
Total	**$9,393,017**	**$7,382,877**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$7,087,210	$9,393,017	$2,305,807

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$63,877,911	$65,280,528
▪ Tier 1 General Service	101,853,318	119,085,824
▪ Tier 2 Police & Fire	26,006,005	19,349,197
▪ Tier 2 General Service	35,735,809	27,884,083
▪ **Total Active Members**	**$227,473,043**	**$231,599,632**
Dormant Members	39,399,824	43,063,373
Retired Members and Beneficiaries	440,887,788	445,163,597
Total Actuarial Accrued Liability	**$707,760,655**	**$719,826,602**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$742,658,204	$707,760,655	($34,897,549)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$707,760,655	$719,826,602
2. Actuarial value of assets	647,467,866	592,998,990
3. Unfunded accrued liability *(1. – 2.)*	60,292,789	126,827,612
4. Funded percentage *(2. ÷ 1.)*	91%	82%
5. Combined valuation payroll	$94,530,650	$95,549,026
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	64%	133%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$60,292,789	$4,363,983
Total				**$60,292,789**	**$4,363,983**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$719,826,602
b. Normal cost at December 31, 2011	7,382,877
c. Benefit payments during 2012	(40,769,663)
d. Interest at 8.0% to December 31, 2012	56,545,972
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	742,985,788
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(34,897,549)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	708,088,239
2. Actuarial accrued liability at December 31, 2012	707,760,655
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	327,584
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	592,998,990
b. Contributions for 2012[1]	9,159,765
c. Benefit payments and expenses during 2012	(41,091,323)
d. Interest at 8.0% to December 31, 2012	46,162,657
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	607,230,089
5. Actuarial value of assets at December 31, 2012	647,467,866
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	40,237,777
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$40,565,361**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$126,827,612**
2. Expected increase	8,928,087
3. Liability (gain)/loss	(327,584)
4. Asset (gain)/loss	(40,237,777)
5. Change due to changes in assumptions, methods, and plan provisions	(34,897,549)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$60,292,789**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$2,205,997	$12,126,753	18.19%	$2,241,982	$13,054,093	17.17%
Tier 1 General Service	3,433,459	20,691,696	16.59%	1,349,335	22,822,204	5.91%
Tier 2 Police & Fire	1,762,208	11,539,688	15.27%	1,677,660	11,598,087	14.46%
Tier 2 General Service	1,991,353	18,434,049	10.80%	2,113,900	19,558,914	10.81%
Total	**$9,393,017**	**$62,792,186**	**14.96%**	**$7,382,877**	**$67,033,298**	**11.01%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$60,292,789	$126,827,612
2. Next year's Tier 1/Tier 2 UAL payment	4,363,983	9,318,973
3. Combined valuation payroll	94,530,650	95,549,026
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.62%	9.75%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.96%	11.01%
b. Tier 1/Tier 2 UAL rate	4.62%	9.75%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.71%	20.89%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.36%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.36%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.67%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	91%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.36%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.36%
7. July 1, 2015 total pension rate, before adjustment	19.71%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.35%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.62%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.27%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.36%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.96%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.96%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.36%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.96%	11.01%
b. Tier 1/Tier 2 UAL rate	1.27%	5.22%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.36%	16.36%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$20,691,696	$12,126,753	$32,818,449
Tier 2	18,434,049	11,539,688	29,973,737
Tier 1/Tier 2 valuation payroll	39,125,745	23,666,441	62,792,186
OPSRP valuation payroll	22,249,183	9,489,281	31,738,464
Combined valuation payroll	**$61,374,928**	**$33,155,722**	**$94,530,650**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	323	310	496	1,129	349	326	442	1,117
Police & Fire	117	122	118	357	125	122	102	349
Total	440	432	614	1,486	474	448	544	1,466
Active Members with previous service segments with the employer								
General Service	155	112	N/A	267	213	151	N/A	364
Police & Fire	11	9	N/A	20	16	16	N/A	32
Total	166	121	N/A	287	229	167	N/A	396
Dormant Members								
General Service	220	139	28	387	220	142	23	385
Police & Fire	14	15	4	33	19	15	3	37
Total	234	154	32	420	239	157	26	422
Retired Members and Beneficiaries								
General Service	950	60	4	1,014	876	49	4	929
Police & Fire	363	17	1	381	360	13	0	373
Total	1,313	77	5	1,395	1,236	62	4	1,302
Grand Total Number of Members	**2,153**	**784**	**651**	**3,588**	**2,178**	**834**	**574**	**3,586**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29		1								**1**
30-34		13	11							**24**
35-39		18	48	16						**82**
40-44		18	71	44	11	1				**145**
45-49	1	5	57	44	27	19				**153**
50-54		7	40	43	28	28	4			**150**
55-59		11	33	40	42	41	17		1	**185**
60-64		4	25	21	26	22	6			**104**
65-69		1	11	3	5	2	2		1	**25**
70-74			2	1						**3**
75+										
Total	**1**	**78**	**298**	**212**	**139**	**113**	**29**	**0**	**2**	**872**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29	5	208
30-34	10	1,338
35-39	33	1,052
40-44	50	708
45-49	54	974
50-54	62	1,372
55-59	80	1,393
60-64	63	882
65-69	22	940
70-74	5	165
75+	4	212
Total	388	1,061

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	11	1,433
45-49	2	1,037
50-54	22	2,815
55-59	140	3,316
60-64	367	2,574
65-69	350	2,452
70-74	202	2,120
75-79	150	1,824
80-84	62	1,840
85-89	54	1,244
90-94	26	1,210
95-99	4	332
100+		
Total	1,390	2,347

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Eagle Point/2282
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Eagle Point/2282

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Eagle Point/2282

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Eagle Point -- #2282

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Eagle Point to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Eagle Point.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Eagle Point

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.70%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.77%)	(0.77%)	(0.77%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.53%**	**7.19%**	**11.29%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.09%**	**7.67%**	**11.77%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 83%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.93%	10.93%
Minimum July 1, 2015 Rate	7.93%	4.93%
Maximum July 1, 2015 Rate	13.93%	16.93%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$2,332,061	$1,776,883	($555,178)	131%	$661,509	(84%)
12/31/2008	1,747,730	1,982,202	234,472	88%	783,617	30%
12/31/2009	2,041,520	2,211,444	169,924	92%	663,580	26%
12/31/2010	2,057,505	2,442,645	385,140	84%	614,657	63%
12/31/2011	2,019,516	2,540,783	521,267	79%	689,745	76%
12/31/2012	2,240,662	2,683,723	443,061	83%	732,095	61%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Eagle Point

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$443,061	$521,267
Allocated pooled OPSRP UAL	51,600	11,769
Side account	0	0
Net unfunded pension actuarial accrued liability	494,661	533,036
Combined valuation payroll	732,095	689,745
Net pension UAL as a percentage of payroll	68%	77%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$15,360	$17,868

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$58,013	$64,682
Tier 1/Tier 2 valuation payroll	394,738	452,692
Tier 1/Tier 2 pension normal cost rate	14.70%	14.29%
Tier 1/ Tier 2 Actuarial accrued liability	$2,683,723	$2,540,783
Actuarial asset value	2,240,662	2,019,516
Tier 1/Tier 2 Unfunded actuarial accrued liability	443,061	521,267
Tier 1/ Tier 2 Funded status	83%	79%
Combined valuation payroll	$732,095	$689,745
Tier 1/Tier 2 UAL as a percentage of payroll	61%	76%
Tier 1/Tier 2 UAL rate	(0.77%)	(0.06%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	6	7
Tier 1/Tier 2 dormant members	2	1
Tier 1/Tier 2 retirees and beneficiaries	8	8

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	732,095	689,745
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$118,304	$103,512
2. Employer reserves	1,144,523	963,658
3. Benefits in force reserve	977,835	952,346
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,240,662**	**$2,019,516**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$2,019,516
2. Regular employer contributions	37,742
3. Benefit payments and expenses	(153,576)
4. Adjustments[2]	57,334
5. Interest credited	279,647
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,240,662**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$8,569	$19,452
Tier 1 General Service	0	0
Tier 2 Police & Fire	49,444	45,230
Tier 2 General Service	0	0
Total	**$58,013**	**$64,682**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$56,121	$58,013	$1,892

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$68,867	$265,551
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	714,973	543,167
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$783,840**	**$808,718**
Dormant Members	252,096	0
Retired Members and Beneficiaries	1,647,787	1,732,065
Total Actuarial Accrued Liability	**$2,683,723**	**$2,540,783**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$2,675,439	$2,683,723	$8,284

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$2,683,723	$2,540,783
2. Actuarial value of assets	2,240,662	2,019,516
3. Unfunded accrued liability *(1. – 2.)*	443,061	521,267
4. Funded percentage *(2. ÷ 1.)*	83%	79%
5. Combined valuation payroll	$732,095	$689,745
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	61%	76%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$443,061	$32,069
Total				**$443,061**	**$32,069**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$2,540,783
b. Normal cost at December 31, 2011	64,682
c. Benefit payments during 2012	(152,374)
d. Interest at 8.0% to December 31, 2012	202,342
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	2,655,433
f. Change in actuarial accrued liability due to assumption, method, and plan changes	8,284
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	2,663,717
2. Actuarial accrued liability at December 31, 2012	2,683,723
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(20,006)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	2,019,516
b. Contributions for 2012[1]	37,742
c. Benefit payments and expenses during 2012	(153,576)
d. Interest at 8.0% to December 31, 2012	156,928
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,060,610
5. Actuarial value of assets at December 31, 2012	2,240,662
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	180,053
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$160,047**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$521,267**
2. Expected increase	73,557
3. Liability (gain)/loss	20,006
4. Asset (gain)/loss	(180,053)
5. Change due to changes in assumptions, methods, and plan provisions	8,284
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$443,061**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$8,569	$62,340	13.75%	$19,452	$126,225	15.41%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	49,444	332,398	14.87%	45,230	326,467	13.85%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$58,013**	**$394,738**	**14.70%**	**$64,682**	**$452,692**	**14.29%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$443,061	$521,267
2. Next year's Tier 1/Tier 2 UAL payment	32,069	35,373
3. Combined valuation payroll	732,095	689,745
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.38%	5.13%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.70%	14.29%
b. Tier 1/Tier 2 UAL rate	4.38%	5.13%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.21%	19.55%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.93%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.93%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.19%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	83%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.93%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.93%
7. July 1, 2015 total pension rate, before adjustment	19.21%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.28%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.38%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.90%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.93%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.70%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.70%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.93%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.70%	14.29%
b. Tier 1/Tier 2 UAL rate	(0.90%)	(0.19%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.93%	14.23%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$62,340	$62,340
Tier 2	0	332,398	332,398
Tier 1/Tier 2 valuation payroll	0	394,738	394,738
OPSRP valuation payroll	0	337,357	337,357
Combined valuation payroll	**$0**	**$732,095**	**$732,095**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	5	5	11	2	5	4	11
Total	1	5	5	11	2	5	4	11
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	1	N/A	1
Total	0	0	N/A	0	0	1	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	1	0	2	0	1	0	1
Total	1	1	0	2	0	1	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	8	0	0	8	8	0	0	8
Total	8	0	0	8	8	0	0	8
Grand Total Number of Members	**10**	**6**	**5**	**21**	**10**	**7**	**4**	**21**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39		1								**1**
40-44			1	1						**2**
45-49		1	1							**2**
50-54										
55-59			1							**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**2**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**6**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	0
50-54		
55-59		
60-64	1	1,740
65-69		
70-74		
75+		
Total	2	870

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	1,807
60-64	1	61
65-69	3	1,305
70-74	1	2,696
75-79	1	584
80-84		
85-89		
90-94		
95-99		
100+		
Total	8	1,359

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Dufur/2262
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Dufur/2262

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Dufur -- #2262

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Dufur to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Dufur.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Dufur

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.67%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	5.07%	5.07%	5.07%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.34%**	**13.03%**	**17.13%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.90%**	**13.51%**	**17.61%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 88%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.74%	14.74%
Minimum July 1, 2015 Rate	11.74%	8.74%
Maximum July 1, 2015 Rate	17.74%	20.74%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$704,741	$671,034	($33,707)	105%	$91,331	(37%)
12/31/2008	511,116	683,432	172,316	75%	90,910	190%
12/31/2009	586,795	697,077	110,282	84%	89,502	123%
12/31/2010	592,439	715,139	122,700	83%	62,947	195%
12/31/2011	572,637	733,287	160,650	78%	91,905	175%
12/31/2012	629,723	718,190	88,467	88%	102,070	87%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Dufur

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$88,467	$160,650
Allocated pooled OPSRP UAL	7,194	1,568
Side account	0	0
Net unfunded pension actuarial accrued liability	95,661	162,218
Combined valuation payroll	102,070	91,905
Net pension UAL as a percentage of payroll	94%	177%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,141	$2,381

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$5,731	$5,151
Tier 1/Tier 2 valuation payroll	45,245	43,521
Tier 1/Tier 2 pension normal cost rate	12.67%	11.84%
Tier 1/ Tier 2 Actuarial accrued liability	$718,190	$733,287
Actuarial asset value	629,723	572,637
Tier 1/Tier 2 Unfunded actuarial accrued liability	88,467	160,650
Tier 1/ Tier 2 Funded status	88%	78%
Combined valuation payroll	$102,070	$91,905
Tier 1/Tier 2 UAL as a percentage of payroll	87%	175%
Tier 1/Tier 2 UAL rate	5.07%	6.50%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	102,070	91,905
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$36,830	$31,353
2. Employer reserves	241,600	199,274
3. Benefits in force reserve	351,293	342,010
4. Total market value of assets ***(1. + 2. + 3.)***	**$629,723**	**$572,637**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$572,637
2.	Regular employer contributions	12,070
3.	Benefit payments and expenses	(55,173)
4.	Adjustments [2]	21,626
5.	Interest credited	78,563
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$629,723**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	5,731	5,151
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$5,731**	**$5,151**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$5,672	$5,731	$59

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	126,213	111,262
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$126,213**	**$111,262**
Dormant Members	0	0
Retired Members and Beneficiaries	591,977	622,025
Total Actuarial Accrued Liability	**$718,190**	**$733,287**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$749,489	$718,190	($31,299)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$718,190	$733,287
2. Actuarial value of assets	629,723	572,637
3. Unfunded accrued liability *(1. – 2.)*	88,467	160,650
4. Funded percentage *(2. ÷ 1.)*	88%	78%
5. Combined valuation payroll	$102,070	$91,905
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	87%	175%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$88,467	$6,403
Total				**$88,467**	**$6,403**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$733,287
b. Normal cost at December 31, 2011	5,151
c. Benefit payments during 2012	(54,741)
d. Interest at 8.0% to December 31, 2012	56,885
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	740,582
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(31,299)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	709,283
2. Actuarial accrued liability at December 31, 2012	718,190
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(8,907)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	572,637
b. Contributions for 2012[1]	12,070
c. Benefit payments and expenses during 2012	(55,173)
d. Interest at 8.0% to December 31, 2012	44,087
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	573,621
5. Actuarial value of assets at December 31, 2012	629,723
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	56,102
7. Total actuarial gain/(loss) *(3. + 6.)*	**$47,195**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$160,650**
2. Expected increase	6,311
3. Liability (gain)/loss	8,907
4. Asset (gain)/loss	(56,102)
5. Change due to changes in assumptions, methods, and plan provisions	(31,299)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$88,467**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	5,731	45,245	12.67%	5,151	43,521	11.84%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$5,731**	**$45,245**	**12.67%**	**$5,151**	**$43,521**	**11.84%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$88,467	$160,650
2. Next year's Tier 1/Tier 2 UAL payment	6,403	11,974
3. Combined valuation payroll	102,070	91,905
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.27%	13.03%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.67%	11.84%
b. Tier 1/Tier 2 UAL rate	6.27%	13.03%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.07%	25.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.74%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.74%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.95%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	88%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.74%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.74%
7. July 1, 2015 total pension rate, before adjustment	19.07%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.33%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	6.27%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.94%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.74%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.67%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.67%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.74%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.67%	11.84%
b. Tier 1/Tier 2 UAL rate	4.94%	6.37%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.74%	18.34%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$45,245	$0	$45,245
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	45,245	0	45,245
OPSRP valuation payroll	56,825	0	56,825
Combined valuation payroll	**$102,070**	**$0**	**$102,070**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	2	3	1	0	2	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	2	3	1	0	2	3
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	0	N/A	1	1	0	N/A	1
Dormant Members								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	1	1
Retired Members and Beneficiaries								
General Service	4	0	0	4	4	0	0	4
Police & Fire	1	0	0	1	1	0	0	1
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**7**	**0**	**3**	**10**	**7**	**0**	**3**	**10**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59				1						**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	234
60-64		
65-69	2	1,771
70-74	1	54
75-79		
80-84	1	252
85-89		
90-94		
95-99		
100+		
Total	5	816

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Culver/2257
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Culver/2257

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Culver/2257

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Culver -- #2257

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Culver to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Culver.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Culver

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.81%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.80%)	(0.80%)	(0.80%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.61%**	**7.16%**	**11.26%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.17%**	**7.64%**	**11.74%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 86%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.01%	10.01%
Minimum July 1, 2015 Rate	7.01%	4.01%
Maximum July 1, 2015 Rate	13.01%	16.01%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$537,016	$545,213	$8,197	99%	$106,108	8%
12/31/2008	413,487	564,527	151,040	73%	119,335	127%
12/31/2009	466,386	607,627	141,241	77%	99,352	142%
12/31/2010	502,571	642,042	139,471	78%	102,486	136%
12/31/2011	498,653	673,446	174,793	74%	108,081	162%
12/31/2012	563,057	653,919	90,862	86%	119,064	76%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Culver

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$90,862	$174,793
Allocated pooled OPSRP UAL	8,392	1,844
Side account	0	0
Net unfunded pension actuarial accrued liability	99,254	176,637
Combined valuation payroll	119,064	108,081
Net pension UAL as a percentage of payroll	83%	163%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,498	$2,800

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$13,813	$3,710
Tier 1/Tier 2 valuation payroll	99,997	90,882
Tier 1/Tier 2 pension normal cost rate	13.81%	4.08%
Tier 1/ Tier 2 Actuarial accrued liability	$653,919	$673,446
Actuarial asset value	563,057	498,653
Tier 1/Tier 2 Unfunded actuarial accrued liability	90,862	174,793
Tier 1/ Tier 2 Funded status	86%	74%
Combined valuation payroll	$119,064	$108,081
Tier 1/Tier 2 UAL as a percentage of payroll	76%	162%
Tier 1/Tier 2 UAL rate	(0.80%)	10.33%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	3	2
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	119,064	108,081
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$146,495	$127,933
2. Employer reserves	253,585	211,614
3. Benefits in force reserve	162,977	159,106
4. Total market value of assets ***(1. + 2. + 3.)***	**$563,057**	**$498,653**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$498,653
2.	Regular employer contributions	10,133
3.	Benefit payments and expenses	(25,597)
4.	Adjustments[2]	15,375
5.	Interest credited	64,493
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$563,057**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	13,813	3,710
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$13,813**	**$3,710**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$6,948	$13,813	$6,865

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	362,305	367,634
▪ Tier 2 Police & Fire	100	314
▪ Tier 2 General Service	14	909
▪ **Total Active Members**	**$362,419**	**$368,857**
Dormant Members	16,860	15,216
Retired Members and Beneficiaries	274,640	289,373
Total Actuarial Accrued Liability	**$653,919**	**$673,446**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$706,323	$653,919	($52,404)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$653,919	$673,446
2. Actuarial value of assets	563,057	498,653
3. Unfunded accrued liability *(1. – 2.)*	90,862	174,793
4. Funded percentage *(2. ÷ 1.)*	86%	74%
5. Combined valuation payroll	$119,064	$108,081
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	76%	162%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$90,862	$6,577
Total				**$90,862**	**$6,577**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$673,446
b. Normal cost at December 31, 2011	3,710
c. Benefit payments during 2012	(25,396)
d. Interest at 8.0% to December 31, 2012	53,157
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	704,917
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(52,404)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	652,513
2. Actuarial accrued liability at December 31, 2012	653,919
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,406)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	498,653
b. Contributions for 2012[1]	10,133
c. Benefit payments and expenses during 2012	(25,597)
d. Interest at 8.0% to December 31, 2012	39,274
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	522,463
5. Actuarial value of assets at December 31, 2012	563,057
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	40,594
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$39,188**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$174,793**
2. Expected increase	7,661
3. Liability (gain)/loss	1,406
4. Asset (gain)/loss	(40,594)
5. Change due to changes in assumptions, methods, and plan provisions	(52,404)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$90,862**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	13,813	99,997	13.81%	3,710	90,882	4.08%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$13,813**	**$99,997**	**13.81%**	**$3,710**	**$90,882**	**4.08%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$90,862	$174,793
2. Next year's Tier 1/Tier 2 UAL payment	6,577	13,618
3. Combined valuation payroll	119,064	108,081
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.52%	12.60%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.81%	4.08%
b. Tier 1/Tier 2 UAL rate	5.52%	12.60%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.46%	16.81%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.01%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.01%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.00%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	86%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.01%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.01%
7. July 1, 2015 total pension rate, before adjustment	19.46%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(6.45%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	5.52%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.93%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.01%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.81%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.81%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.01%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.81%	4.08%
b. Tier 1/Tier 2 UAL rate	(0.93%)	10.20%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.01%	14.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$99,997	$0	$99,997
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	99,997	0	99,997
OPSRP valuation payroll	19,067	0	19,067
Combined valuation payroll	**$119,064**	**$0**	**$119,064**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	0	1	3	2	0	1	3
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	1	3	2	0	1	3
Active Members with previous service segments with the employer								
General Service	1	1	N/A	2	3	2	N/A	5
Police & Fire	0	1	N/A	1	0	1	N/A	1
Total	1	2	N/A	3	3	3	N/A	6
Dormant Members								
General Service	1	2	1	4	1	1	1	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	2	1	4	1	1	1	3
Retired Members and Beneficiaries								
General Service	3	0	0	3	3	0	0	3
Police & Fire	1	1	0	2	1	1	0	2
Total	4	1	0	5	4	1	0	5
Grand Total Number of Members	**8**	**5**	**2**	**15**	**10**	**5**	**2**	**17**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
	Years of Service									
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54				1						1
55-59										
60-64					1					1
65-69										
70-74										
75+										
Total	0	0	0	1	1	0	0	0	0	2

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	336
45-49		
50-54	1	6
55-59	1	17
60-64		
65-69		
70-74		
75+		
Total	3	119

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	593
60-64	1	219
65-69	1	4
70-74	1	1,166
75-79	1	213
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	439

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Cottage Grove/2127
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Cottage Grove/2127

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Cottage Grove -- #2127

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Cottage Grove to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Cottage Grove.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Cottage Grove

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.37%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.13%	0.13%	0.13%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.10%**	**8.09%**	**12.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.66%**	**8.57%**	**12.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 95%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.50%	13.50%
Minimum July 1, 2015 Rate	10.50%	7.50%
Maximum July 1, 2015 Rate	16.50%	19.50%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$33,138,078	$29,918,707	($3,219,371)	111%	$3,349,203	(96%)
12/31/2008	25,591,390	31,631,437	6,040,047	81%	3,544,495	170%
12/31/2009	29,216,208	32,864,480	3,648,272	89%	3,747,512	97%
12/31/2010	31,425,921	34,333,400	2,907,479	92%	3,750,985	78%
12/31/2011	31,039,561	35,814,645	4,775,084	87%	3,832,180	125%
12/31/2012	34,036,351	35,941,947	1,905,596	95%	4,097,780	47%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Cottage Grove

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,905,596	$4,775,084
Allocated pooled OPSRP UAL	288,823	65,386
Side account	0	0
Net unfunded pension actuarial accrued liability	2,194,419	4,840,470
Combined valuation payroll	4,097,780	3,832,180
Net pension UAL as a percentage of payroll	54%	126%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$85,973	$99,275

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$468,487	$234,208
Tier 1/Tier 2 valuation payroll	2,862,091	2,769,559
Tier 1/Tier 2 pension normal cost rate	16.37%	8.46%
Tier 1/ Tier 2 Actuarial accrued liability	$35,941,947	$35,814,645
Actuarial asset value	34,036,351	31,039,561
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,905,596	4,775,084
Tier 1/ Tier 2 Funded status	95%	87%
Combined valuation payroll	$4,097,780	$3,832,180
Tier 1/Tier 2 UAL as a percentage of payroll	47%	125%
Tier 1/Tier 2 UAL rate	0.13%	8.04%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	48	48
Tier 1/Tier 2 dormant members	24	29
Tier 1/Tier 2 retirees and beneficiaries	89	83

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	4,097,780	3,832,180
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$6,672,144	$6,480,785
2. Employer reserves	16,614,895	14,806,914
3. Benefits in force reserve	10,749,312	9,751,862
4. Total market value of assets ***(1. + 2. + 3.)***	**$34,036,351**	**$31,039,561**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$31,039,561
2.	Regular employer contributions	437,646
3.	Benefit payments and expenses	(1,688,256)
4.	Adjustments [2]	227,214
5.	Interest credited	4,020,186
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$34,036,351**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$135,648	$89,287
Tier 1 General Service	214,429	38,148
Tier 2 Police & Fire	31,792	25,642
Tier 2 General Service	86,618	81,131
Total	**$468,487**	**$234,208**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$255,116	$468,487	$213,371

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$6,346,561	$6,390,410
▪ Tier 1 General Service	6,252,793	6,155,833
▪ Tier 2 Police & Fire	639,490	487,918
▪ Tier 2 General Service	1,986,126	1,472,770
▪ **Total Active Members**	**$15,224,970**	**$14,506,931**
Dormant Members	2,602,901	3,571,651
Retired Members and Beneficiaries	18,114,076	17,736,063
Total Actuarial Accrued Liability	**$35,941,947**	**$35,814,645**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$37,934,399	$35,941,947	($1,992,452)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$35,941,947	$35,814,645
2. Actuarial value of assets	34,036,351	31,039,561
3. Unfunded accrued liability *(1. – 2.)*	1,905,596	4,775,084
4. Funded percentage *(2. ÷ 1.)*	95%	87%
5. Combined valuation payroll	$4,097,780	$3,832,180
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	47%	125%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,905,596	$137,927
Total				**$1,905,596**	**$137,927**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$35,814,645
b. Normal cost at December 31, 2011	234,208
c. Benefit payments during 2012	(1,675,040)
d. Interest at 8.0% to December 31, 2012	2,816,907
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	37,190,720
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,992,452)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	35,198,268
2. Actuarial accrued liability at December 31, 2012	35,941,947
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(743,679)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	31,039,561
b. Contributions for 2012[1]	437,646
c. Benefit payments and expenses during 2012	(1,688,256)
d. Interest at 8.0% to December 31, 2012	2,433,141
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	32,222,092
5. Actuarial value of assets at December 31, 2012	34,036,351
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,814,259
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$1,070,580**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$4,775,084**
2. Expected increase	193,544
3. Liability (gain)/loss	743,679
4. Asset (gain)/loss	(1,814,259)
5. Change due to changes in assumptions, methods, and plan provisions	(1,992,452)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$1,905,596**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$135,648	$672,596	20.17%	$89,287	$666,092	13.40%
Tier 1 General Service	214,429	1,162,287	18.45%	38,148	1,108,035	3.44%
Tier 2 Police & Fire	31,792	209,041	15.21%	25,642	202,626	12.65%
Tier 2 General Service	86,618	818,167	10.59%	81,131	792,806	10.23%
Total	**$468,487**	**$2,862,091**	**16.37%**	**$234,208**	**$2,769,559**	**8.46%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,905,596	$4,775,084
2. Next year's Tier 1/Tier 2 UAL payment	137,927	346,798
3. Combined valuation payroll	4,097,780	3,832,180
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.37%	9.05%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.37%	8.46%
b. Tier 1/Tier 2 UAL rate	3.37%	9.05%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.87%	17.64%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.50%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.50%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.70%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	95%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.50%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.50%
7. July 1, 2015 total pension rate, before adjustment	19.87%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.37%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	3.37%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.00%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.50%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.37%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.37%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.50%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.37%	8.46%
b. Tier 1/Tier 2 UAL rate	0.00%	7.91%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.50%	16.50%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,162,287	$672,596	$1,834,883
Tier 2	818,167	209,041	1,027,208
Tier 1/Tier 2 valuation payroll	1,980,454	881,637	2,862,091
OPSRP valuation payroll	988,496	247,193	1,235,689
Combined valuation payroll	**$2,968,950**	**$1,128,830**	**$4,097,780**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	18	18	25	61	18	18	23	59
Police & Fire	9	3	4	16	9	3	3	15
Total	27	21	29	77	27	21	26	74
Active Members with previous service segments with the employer								
General Service	10	10	N/A	20	10	15	N/A	25
Police & Fire	9	6	N/A	15	18	8	N/A	26
Total	19	16	N/A	35	28	23	N/A	51
Dormant Members								
General Service	14	4	3	21	15	4	2	21
Police & Fire	4	2	0	6	6	4	0	10
Total	18	6	3	27	21	8	2	31
Retired Members and Beneficiaries								
General Service	42	4	0	46	41	3	0	44
Police & Fire	40	3	0	43	38	1	0	39
Total	82	7	0	89	79	4	0	83
Grand Total Number of Members	**146**	**50**	**32**	**228**	**155**	**56**	**28**	**239**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		1	2							**3**
35-39		1	1							**2**
40-44			4	2	1					**7**
45-49		1	2		3					**6**
50-54			3	1	1	1	2			**8**
55-59			2	2	3	2	1			**10**
60-64			2	1		2	1	1		**7**
65-69					1	1	1			**3**
70-74		1								**1**
75+			1							**1**
Total	**0**	**4**	**17**	**6**	**9**	**6**	**5**	**1**	**0**	**48**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29	1	143
30-34		
35-39		
40-44	4	1,006
45-49	5	1,474
50-54	4	233
55-59	5	1,531
60-64	4	1,186
65-69	1	353
70-74		
75+		
Total	24	1,051

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	2	164
45-49	2	1,571
50-54	5	2,694
55-59	9	2,157
60-64	19	1,237
65-69	27	1,529
70-74	7	1,631
75-79	10	838
80-84	4	1,220
85-89	3	745
90-94		
95-99	1	104
100+		
Total	89	1,440

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Cornelius/2165
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Cornelius/2165

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Cornelius/2165

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Cornelius -- #2165

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Cornelius to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Cornelius.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Cornelius

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.95%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(1.30%)	(1.30%)	(1.30%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.25%**	**6.66%**	**10.76%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.81%**	**7.14%**	**11.24%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 99%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.65%	8.65%
Minimum July 1, 2015 Rate	5.65%	2.65%
Maximum July 1, 2015 Rate	11.65%	14.65%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$13,318,970	$11,260,902	($2,058,068)	118%	$3,059,681	(67%)
12/31/2008	10,417,104	11,776,605	1,359,501	88%	3,108,035	44%
12/31/2009	12,174,164	12,344,876	170,712	99%	3,230,582	5%
12/31/2010	12,910,986	13,544,596	633,610	95%	3,185,343	20%
12/31/2011	12,741,384	14,273,829	1,532,445	89%	3,159,772	49%
12/31/2012	14,125,865	14,240,263	114,398	99%	3,158,935	4%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Cornelius

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$114,398	$1,532,445
Allocated pooled OPSRP UAL	222,650	53,913
Side account	0	0
Net unfunded pension actuarial accrued liability	337,048	1,586,358
Combined valuation payroll	3,158,935	3,159,772
Net pension UAL as a percentage of payroll	11%	50%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$66,276	$81,855

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$258,555	$202,409
Tier 1/Tier 2 valuation payroll	1,996,792	2,097,728
Tier 1/Tier 2 pension normal cost rate	12.95%	9.65%
Tier 1/ Tier 2 Actuarial accrued liability	$14,240,263	$14,273,829
Actuarial asset value	14,125,865	12,741,384
Tier 1/Tier 2 Unfunded actuarial accrued liability	114,398	1,532,445
Tier 1/ Tier 2 Funded status	99%	89%
Combined valuation payroll	$3,158,935	$3,159,772
Tier 1/Tier 2 UAL as a percentage of payroll	4%	49%
Tier 1/Tier 2 UAL rate	(1.30%)	2.00%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	27	29
Tier 1/Tier 2 dormant members	18	16
Tier 1/Tier 2 retirees and beneficiaries	30	31

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	3,158,935	3,159,772
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,680,287	$2,378,151
2. Employer reserves	7,728,639	6,612,024
3. Benefits in force reserve	3,716,939	3,751,209
4. Total market value of assets ***(1. + 2. + 3.)***	**$14,125,865**	**$12,741,384**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$12,741,384
2.	Regular employer contributions	170,179
3.	Benefit payments and expenses	(583,772)
4.	Adjustments[2]	127,776
5.	Interest credited	1,670,297
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$14,125,865**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$60,402	$51,360
Tier 1 General Service	83,875	29,640
Tier 2 Police & Fire	49,125	44,329
Tier 2 General Service	65,153	77,080
Total	**$258,555**	**$202,409**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$192,132	$258,555	$66,423

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$2,198,208	$2,100,350
▪ Tier 1 General Service	2,439,928	2,516,596
▪ Tier 2 Police & Fire	750,020	563,645
▪ Tier 2 General Service	1,430,940	1,321,594
▪ **Total Active Members**	**$6,819,096**	**$6,502,185**
Dormant Members	1,157,612	949,183
Retired Members and Beneficiaries	6,263,555	6,822,461
Total Actuarial Accrued Liability	**$14,240,263**	**$14,273,829**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$14,718,302	$14,240,263	($478,039)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$14,240,263	$14,273,829
2. Actuarial value of assets	14,125,865	12,741,384
3. Unfunded accrued liability *(1. – 2.)*	114,398	1,532,445
4. Funded percentage *(2. ÷ 1.)*	99%	89%
5. Combined valuation payroll	$3,158,935	$3,159,772
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	4%	49%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$114,398	$8,280
Total				**$114,398**	**$8,280**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$14,273,829
b. Normal cost at December 31, 2011	202,409
c. Benefit payments during 2012	(579,202)
d. Interest at 8.0% to December 31, 2012	1,134,931
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	15,031,967
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(478,039)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	14,553,928
2. Actuarial accrued liability at December 31, 2012	14,240,263
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	313,665
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	12,741,384
b. Contributions for 2012[1]	170,179
c. Benefit payments and expenses during 2012	(583,772)
d. Interest at 8.0% to December 31, 2012	1,002,767
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	13,330,559
5. Actuarial value of assets at December 31, 2012	14,125,865
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	795,306
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$1,108,971**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,532,445**
2. Expected increase	168,963
3. Liability (gain)/loss	(313,665)
4. Asset (gain)/loss	(795,306)
5. Change due to changes in assumptions, methods, and plan provisions	(478,039)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$114,398**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$60,402	$386,675	15.62%	$51,360	$408,907	12.56%
Tier 1 General Service	83,875	663,468	12.64%	29,640	538,988	5.50%
Tier 2 Police & Fire	49,125	333,210	14.74%	44,329	329,174	13.47%
Tier 2 General Service	65,153	613,439	10.62%	77,080	820,659	9.39%
Total	**$258,555**	**$1,996,792**	**12.95%**	**$202,409**	**$2,097,728**	**9.65%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$114,398	$1,532,445
2. Next year's Tier 1/Tier 2 UAL payment	8,280	98,382
3. Combined valuation payroll	3,158,935	3,159,772
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.26%	3.11%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.95%	9.65%
b. Tier 1/Tier 2 UAL rate	0.26%	3.11%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.34%	12.89%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.65%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.65%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.73%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	99%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.65%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.65%
7. July 1, 2015 total pension rate, before adjustment	13.34%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.69%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.26%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.43%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.65%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.95%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.95%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.65%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.95%	9.65%
b. Tier 1/Tier 2 UAL rate	(1.43%)	1.87%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.65%	11.65%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$663,468	$386,675	$1,050,143
Tier 2	613,439	333,210	946,649
Tier 1/Tier 2 valuation payroll	1,276,907	719,885	1,996,792
OPSRP valuation payroll	561,232	600,911	1,162,143
Combined valuation payroll	**$1,838,139**	**$1,320,796**	**$3,158,935**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	9	10	13	32	8	13	12	33
Police & Fire	4	4	9	17	4	4	8	16
Total	13	14	22	49	12	17	20	49
Active Members with previous service segments with the employer								
General Service	5	6	N/A	11	7	12	N/A	19
Police & Fire	1	3	N/A	4	10	4	N/A	14
Total	6	9	N/A	15	17	16	N/A	33
Dormant Members								
General Service	9	7	0	16	9	5	0	14
Police & Fire	1	1	0	2	1	1	0	2
Total	10	8	0	18	10	6	0	16
Retired Members and Beneficiaries								
General Service	13	3	0	16	13	2	0	15
Police & Fire	13	1	0	14	15	1	0	16
Total	26	4	0	30	28	3	0	31
Grand Total Number of Members	**55**	**35**	**22**	**112**	**67**	**42**	**20**	**129**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							1
35-39			3							3
40-44			2	4						6
45-49			2	3	1					6
50-54				2						2
55-59			1	1	2	2				6
60-64			2	1						3
65-69										
70-74										
75+										
Total	**0**	**0**	**11**	**11**	**3**	**2**	**0**	**0**	**0**	**27**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	232
35-39	4	441
40-44		
45-49		
50-54	1	289
55-59	6	312
60-64	6	1,001
65-69		
70-74		
75+		
Total	18	564

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	8	1,917
60-64	4	784
65-69	6	2,012
70-74	5	1,505
75-79	4	1,216
80-84	1	420
85-89	2	410
90-94		
95-99		
100+		
Total	30	1,472

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Coos Bay/2152
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Coos Bay/2152

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Coos Bay -- #2152

Secondary Employers

2190 City Of Eastside

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Coos Bay to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Coos Bay.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Coos Bay

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	15.51%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.46%	0.46%	0.46%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.57%**	**8.42%**	**12.52%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.13%**	**8.90%**	**13.00%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 91%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	12.97%	12.97%
Minimum July 1, 2015 Rate	9.97%	6.97%
Maximum July 1, 2015 Rate	15.97%	18.97%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$38,665,975	$35,658,154	($3,007,821)	108%	$4,801,518	(63%)
12/31/2008	29,981,209	37,359,256	7,378,047	80%	5,072,888	145%
12/31/2009	33,985,858	38,913,223	4,927,365	87%	5,474,299	90%
12/31/2010	35,757,840	40,041,572	4,283,732	89%	5,849,235	73%
12/31/2011	35,279,915	42,431,747	7,151,832	83%	6,136,958	117%
12/31/2012	39,127,841	43,090,689	3,962,848	91%	6,598,945	60%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Coos Bay

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$3,962,848	$7,151,832
Allocated pooled OPSRP UAL	465,112	104,711
Side account	0	0
Net unfunded pension actuarial accrued liability	4,427,960	7,256,543
Combined valuation payroll	6,598,945	6,136,958
Net pension UAL as a percentage of payroll	67%	118%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$138,449	$158,981

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$668,486	$573,005
Tier 1/Tier 2 valuation payroll	4,309,422	4,284,536
Tier 1/Tier 2 pension normal cost rate	15.51%	13.37%
Tier 1/ Tier 2 Actuarial accrued liability	$43,090,689	$42,431,747
Actuarial asset value	39,127,841	35,279,915
Tier 1/Tier 2 Unfunded actuarial accrued liability	3,962,848	7,151,832
Tier 1/ Tier 2 Funded status	91%	83%
Combined valuation payroll	$6,598,945	$6,136,958
Tier 1/Tier 2 UAL as a percentage of payroll	60%	117%
Tier 1/Tier 2 UAL rate	0.46%	2.60%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	57	58
Tier 1/Tier 2 dormant members	20	23
Tier 1/Tier 2 retirees and beneficiaries	106	100

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	6,598,945	6,136,958
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$6,988,136	$6,555,950
2. Employer reserves	19,346,711	17,067,890
3. Benefits in force reserve	12,792,994	11,656,075
4. Total market value of assets ***(1. + 2. + 3.)***	**$39,127,841**	**$35,279,915**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$35,279,915
2.	Regular employer contributions	575,524
3.	Benefit payments and expenses	(2,009,230)
4.	Adjustments [2]	623,740
5.	Interest credited	4,657,893
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$39,127,841**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$186,729	$218,417
Tier 1 General Service	166,460	57,564
Tier 2 Police & Fire	251,816	236,625
Tier 2 General Service	63,481	60,399
Total	**$668,486**	**$573,005**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$610,968	$668,486	$57,518

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$6,954,778	$6,332,044
▪ Tier 1 General Service	5,712,435	6,783,028
▪ Tier 2 Police & Fire	3,897,371	2,919,595
▪ Tier 2 General Service	785,966	557,402
▪ **Total Active Members**	**$17,350,550**	**$16,592,069**
Dormant Members	4,182,177	4,640,353
Retired Members and Beneficiaries	21,557,962	21,199,325
Total Actuarial Accrued Liability	**$43,090,689**	**$42,431,747**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$44,508,540	$43,090,689	($1,417,851)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$43,090,689	$42,431,747
2. Actuarial value of assets	39,127,841	35,279,915
3. Unfunded accrued liability *(1. – 2.)*	3,962,848	7,151,832
4. Funded percentage *(2. ÷ 1.)*	91%	83%
5. Combined valuation payroll	$6,598,945	$6,136,958
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	60%	117%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$3,962,848	$286,830
Total				**$3,962,848**	**$286,830**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$42,431,747
b. Normal cost at December 31, 2011	573,005
c. Benefit payments during 2012	(1,993,502)
d. Interest at 8.0% to December 31, 2012	3,360,640
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	44,371,890
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(1,417,851)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	42,954,039
2. Actuarial accrued liability at December 31, 2012	43,090,689
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(136,650)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	35,279,915
b. Contributions for 2012[1]	575,524
c. Benefit payments and expenses during 2012	(2,009,230)
d. Interest at 8.0% to December 31, 2012	2,765,045
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	36,611,253
5. Actuarial value of assets at December 31, 2012	39,127,841
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	2,516,588
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$2,379,938**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$7,151,832**
2. Expected increase	608,805
3. Liability (gain)/loss	136,650
4. Asset (gain)/loss	(2,516,588)
5. Change due to changes in assumptions, methods, and plan provisions	(1,417,851)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$3,962,848**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$186,729	$1,096,631	17.03%	$218,417	$1,131,564	19.30%
Tier 1 General Service	166,460	1,058,182	15.73%	57,564	1,085,568	5.30%
Tier 2 Police & Fire	251,816	1,605,711	15.68%	236,625	1,568,056	15.09%
Tier 2 General Service	63,481	548,898	11.57%	60,399	499,348	12.10%
Total	**$668,486**	**$4,309,422**	**15.51%**	**$573,005**	**$4,284,536**	**13.37%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$3,962,848	$7,151,832
2. Next year's Tier 1/Tier 2 UAL payment	286,830	530,683
3. Combined valuation payroll	6,598,945	6,136,958
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.35%	8.65%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.51%	13.37%
b. Tier 1/Tier 2 UAL rate	4.35%	8.65%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.99%	22.15%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.97%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.97%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.59%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	91%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.97%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	15.97%
7. July 1, 2015 total pension rate, before adjustment	19.99%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.02%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.35%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.33%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	15.97%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	15.51%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	15.51%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.97%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	15.51%	13.37%
b. Tier 1/Tier 2 UAL rate	0.33%	2.47%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	15.97%	15.97%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,058,182	$1,096,631	$2,154,813
Tier 2	548,898	1,605,711	2,154,609
Tier 1/Tier 2 valuation payroll	1,607,080	2,702,342	4,309,422
OPSRP valuation payroll	1,280,402	1,009,121	2,289,523
Combined valuation payroll	**$2,887,482**	**$3,711,463**	**$6,598,945**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	18	10	23	51	19	9	18	46
Police & Fire	11	18	12	41	12	18	12	42
Total	29	28	35	92	31	27	30	88
Active Members with previous service segments with the employer								
General Service	10	3	N/A	13	24	5	N/A	29
Police & Fire	14	0	N/A	14	16	2	N/A	18
Total	24	3	N/A	27	40	7	N/A	47
Dormant Members								
General Service	9	4	3	16	9	6	1	16
Police & Fire	7	0	1	8	8	0	1	9
Total	16	4	4	24	17	6	2	25
Retired Members and Beneficiaries								
General Service	56	8	0	64	52	7	0	59
Police & Fire	42	0	0	42	41	0	0	41
Total	98	8	0	106	93	7	0	100
Grand Total Number of Members	**167**	**43**	**39**	**249**	**181**	**47**	**32**	**260**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34			2							**2**
35-39			3	1						**4**
40-44		1	8	5						**14**
45-49		1	2	2	5	2				**12**
50-54			1	2	5	1				**9**
55-59		2	1	1		3				**7**
60-64			1	2	2	1	1			**7**
65-69			1			1				**2**
70-74										
75+										
Total	**0**	**4**	**19**	**13**	**12**	**8**	**1**	**0**	**0**	**57**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	2,389
45-49	4	2,577
50-54	4	1,653
55-59	4	2,222
60-64	5	1,870
65-69	1	2
70-74	1	43
75+		
Total	20	1,880

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	2	457
45-49	1	2,282
50-54	1	95
55-59	8	2,098
60-64	27	1,421
65-69	27	1,865
70-74	23	1,118
75-79	10	1,347
80-84	5	1,003
85-89	1	253
90-94		
95-99	1	152
100+		
Total	106	1,447

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Clatskanie/2162
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Clatskanie/2162

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Clatskanie/2162

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Clatskanie -- #2162

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Clatskanie to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Clatskanie.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Clatskanie

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	20.75%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(6.09%)	(6.09%)	(6.09%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.26%**	**1.87%**	**5.97%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.82%**	**2.35%**	**6.45%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 95%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	11.66%	11.66%
Minimum July 1, 2015 Rate	8.66%	5.66%
Maximum July 1, 2015 Rate	14.66%	17.66%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$7,108,423	$6,522,450	($585,973)	109%	$863,410	(68%)
12/31/2008	5,738,465	7,061,587	1,323,122	81%	754,261	175%
12/31/2009	6,704,003	7,633,373	929,370	88%	964,009	96%
12/31/2010	6,665,662	7,626,631	960,969	87%	987,654	97%
12/31/2011	6,731,192	8,033,650	1,302,458	84%	1,019,475	128%
12/31/2012	7,442,100	7,822,198	380,098	95%	872,808	44%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Clatskanie

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$380,098	$1,302,458
Allocated pooled OPSRP UAL	61,518	17,395
Side account	0	0
Net unfunded pension actuarial accrued liability	441,616	1,319,853
Combined valuation payroll	872,808	1,019,475
Net pension UAL as a percentage of payroll	51%	129%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$18,312	$26,410

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$121,901	$81,483
Tier 1/Tier 2 valuation payroll	587,440	760,855
Tier 1/Tier 2 pension normal cost rate	20.75%	10.71%
Tier 1/ Tier 2 Actuarial accrued liability	$7,822,198	$8,033,650
Actuarial asset value	7,442,100	6,731,192
Tier 1/Tier 2 Unfunded actuarial accrued liability	380,098	1,302,458
Tier 1/ Tier 2 Funded status	95%	84%
Combined valuation payroll	$872,808	$1,019,475
Tier 1/Tier 2 UAL as a percentage of payroll	44%	128%
Tier 1/Tier 2 UAL rate	(6.09%)	3.95%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	9	11
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	20	18

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	872,808	1,019,475
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$1,861,953	$1,657,465
2. Employer reserves	3,336,354	3,131,295
3. Benefits in force reserve	2,243,792	1,942,431
4. Total market value of assets ***(1. + 2. + 3.)***	**$7,442,100**	**$6,731,192**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$6,731,192
2.	Regular employer contributions	85,949
3.	Benefit payments and expenses	(352,404)
4.	Adjustments [2]	119,364
5.	Interest credited	857,999
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$7,442,100**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$12,830	$33,059
Tier 1 General Service	81,289	20,996
Tier 2 Police & Fire	11,892	11,887
Tier 2 General Service	15,890	15,541
Total	**$121,901**	**$81,483**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$52,098	$121,901	$69,803

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$502,276	$1,015,526
▪ Tier 1 General Service	2,901,274	3,101,015
▪ Tier 2 Police & Fire	206,576	168,052
▪ Tier 2 General Service	141,134	109,562
▪ **Total Active Members**	**$3,751,260**	**$4,394,155**
Dormant Members	289,838	106,725
Retired Members and Beneficiaries	3,781,100	3,532,770
Total Actuarial Accrued Liability	**$7,822,198**	**$8,033,650**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$8,493,649	$7,822,198	($671,451)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$7,822,198	$8,033,650
2. Actuarial value of assets	7,442,100	6,731,192
3. Unfunded accrued liability *(1. – 2.)*	380,098	1,302,458
4. Funded percentage *(2. ÷ 1.)*	95%	84%
5. Combined valuation payroll	$872,808	$1,019,475
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	44%	128%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$380,098	$27,511
Total				**$380,098**	**$27,511**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$8,033,650
b. Normal cost at December 31, 2011	81,483
c. Benefit payments during 2012	(349,645)
d. Interest at 8.0% to December 31, 2012	635,225
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	8,400,713
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(671,451)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	7,729,262
2. Actuarial accrued liability at December 31, 2012	7,822,198
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(92,936)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	6,731,192
b. Contributions for 2012[1]	85,949
c. Benefit payments and expenses during 2012	(352,404)
d. Interest at 8.0% to December 31, 2012	527,837
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	6,992,574
5. Actuarial value of assets at December 31, 2012	7,442,100
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	449,526
7. Total actuarial gain/(loss) *(3. + 6.)*	**$356,590**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,302,458**
2. Expected increase	105,681
3. Liability (gain)/loss	92,936
4. Asset (gain)/loss	(449,526)
5. Change due to changes in assumptions, methods, and plan provisions	(671,451)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$380,098**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$12,830	$66,579	19.27%	$33,059	$169,579	19.49%
Tier 1 General Service	81,289	312,971	25.97%	20,996	381,756	5.50%
Tier 2 Police & Fire	11,892	75,052	15.85%	11,887	79,396	14.97%
Tier 2 General Service	15,890	132,838	11.96%	15,541	130,124	11.94%
Total	**$121,901**	**$587,440**	**20.75%**	**$81,483**	**$760,855**	**10.71%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$380,098	$1,302,458
2. Next year's Tier 1/Tier 2 UAL payment	27,511	95,840
3. Combined valuation payroll	872,808	1,019,475
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.15%	9.40%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.75%	10.71%
b. Tier 1/Tier 2 UAL rate	3.15%	9.40%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	24.03%	20.24%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.66%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.66%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.33%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	95%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.66%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	14.66%
7. July 1, 2015 total pension rate, before adjustment	24.03%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(9.37%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	3.15%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(6.22%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	14.66%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	20.75%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	20.75%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.66%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.75%	10.71%
b. Tier 1/Tier 2 UAL rate	(6.22%)	3.82%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.66%	14.66%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$312,971	$66,579	$379,550
Tier 2	132,838	75,052	207,890
Tier 1/Tier 2 valuation payroll	445,809	141,631	587,440
OPSRP valuation payroll	157,322	128,046	285,368
Combined valuation payroll	**$603,131**	**$269,677**	**$872,808**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	5	2	3	10	6	2	3	11
Police & Fire	1	1	2	4	2	1	2	5
Total	6	3	5	14	8	3	5	16
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	0	N/A	1
Police & Fire	5	0	N/A	5	6	0	N/A	6
Total	6	0	N/A	6	7	0	N/A	7
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	0	0	2	2	0	0	2
Total	2	0	0	2	2	0	0	2
Retired Members and Beneficiaries								
General Service	13	0	0	13	12	0	0	12
Police & Fire	6	1	0	7	5	1	0	6
Total	19	1	0	20	17	1	0	18
Grand Total Number of Members	**33**	**4**	**5**	**42**	**34**	**4**	**5**	**43**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							**1**
45-49			1		1					**2**
50-54										
55-59				2				2		**4**
60-64			1							**1**
65-69						1				**1**
70-74										
75+										
Total	**0**	**0**	**3**	**2**	**1**	**1**	**0**	**2**	**0**	**9**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	0
45-49		
50-54		
55-59	1	1,921
60-64		
65-69		
70-74		
75+		
Total	2	961

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	1	2,719
45-49	1	107
50-54	2	2,531
55-59	1	1,595
60-64	4	1,342
65-69	3	2,340
70-74	1	115
75-79	1	600
80-84	3	742
85-89	1	1,502
90-94	2	56
95-99		
100+		
Total	20	1,321

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Chiloquin/2186
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Chiloquin/2186

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Chiloquin/2186

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott Preppernau

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Chiloquin -- #2186

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Chiloquin to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Chiloquin.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Chiloquin

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.50%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.68%)	(2.68%)	(2.68%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**10.42%**	**5.28%**	**9.38%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**10.98%**	**5.76%**	**9.86%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 122%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	6.82%	6.82%
Minimum July 1, 2015 Rate	3.82%	0.82%
Maximum July 1, 2015 Rate	9.82%	12.82%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$301,289	$159,889	($141,400)	188%	$123,294	(115%)
12/31/2008	217,305	164,346	(52,959)	132%	132,882	(40%)
12/31/2009	251,498	176,052	(75,446)	143%	128,619	(59%)
12/31/2010	271,863	197,519	(74,344)	138%	149,992	(50%)
12/31/2011	269,067	209,321	(59,746)	129%	131,874	(45%)
12/31/2012	301,930	247,577	(54,353)	122%	173,359	(31%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Chiloquin

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($54,353)	($59,746)
Allocated pooled OPSRP UAL	12,219	2,250
Side account	0	0
Net unfunded pension actuarial accrued liability	(42,134)	(57,496)
Combined valuation payroll	173,359	131,874
Net pension UAL as a percentage of payroll	(24%)	(44%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,637	$3,416

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$6,044	$5,999
Tier 1/Tier 2 valuation payroll	48,340	44,222
Tier 1/Tier 2 pension normal cost rate	12.50%	13.57%
Tier 1/ Tier 2 Actuarial accrued liability	$247,577	$209,321
Actuarial asset value	301,930	269,067
Tier 1/Tier 2 Unfunded actuarial accrued liability	(54,353)	(59,746)
Tier 1/ Tier 2 Funded status	122%	129%
Combined valuation payroll	$173,359	$131,874
Tier 1/Tier 2 UAL as a percentage of payroll	(31%)	(45%)
Tier 1/Tier 2 UAL rate	(2.68%)	(4.25%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	173,359	131,874
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$33,699	$29,395
2. Employer reserves	220,542	194,886
3. Benefits in force reserve	47,689	44,787
4. Total market value of assets ***(1. + 2. + 3.)***	**$301,930**	**$269,067**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$269,067
2. Regular employer contributions	(1,877)
3. Benefit payments and expenses	(7,490)
4. Adjustments[2]	4,419
5. Interest credited	37,811
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$301,930**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	6,044	5,999
Total	**$6,044**	**$5,999**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$6,818	$6,044	($774)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	158,237	118,922
▪ **Total Active Members**	**$158,237**	**$118,922**
Dormant Members	8,977	8,944
Retired Members and Beneficiaries	80,363	81,455
Total Actuarial Accrued Liability	**$247,577**	**$209,321**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$231,892	$247,577	$15,685

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$247,577	$209,321
2. Actuarial value of assets	301,930	269,067
3. Unfunded accrued liability *(1. – 2.)*	(54,353)	(59,746)
4. Funded percentage *(2. ÷ 1.)*	122%	129%
5. Combined valuation payroll	$173,359	$131,874
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(31%)	(45%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($54,353)	($3,934)
Total				**($54,353)**	**($3,934)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$209,321
b. Normal cost at December 31, 2011	5,999
c. Benefit payments during 2012	(7,431)
d. Interest at 8.0% to December 31, 2012	16,928
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	224,817
f. Change in actuarial accrued liability due to assumption, method, and plan changes	15,685
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	240,502
2. Actuarial accrued liability at December 31, 2012	247,577
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(7,075)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	269,067
b. Contributions for 2012[1]	(1,877)
c. Benefit payments and expenses during 2012	(7,490)
d. Interest at 8.0% to December 31, 2012	21,151
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	280,850
5. Actuarial value of assets at December 31, 2012	301,930
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	21,080
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$14,005**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($59,746)**
2. Expected increase	3,713
3. Liability (gain)/loss	7,075
4. Asset (gain)/loss	(21,080)
5. Change due to changes in assumptions, methods, and plan provisions	15,685
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($54,353)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	6,044	48,340	12.50%	5,999	44,222	13.57%
Total	**$6,044**	**$48,340**	**12.50%**	**$5,999**	**$44,222**	**13.57%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($54,353)	($59,746)
2. Next year's Tier 1/Tier 2 UAL payment	(3,934)	(5,778)
3. Combined valuation payroll	173,359	131,874
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.27%)	(4.38%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.50%	13.57%
b. Tier 1/Tier 2 UAL rate	(2.27%)	(4.38%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.36%	9.32%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	6.82%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	6.82%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.36%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	122%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	3.82%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	9.82%
7. July 1, 2015 total pension rate, before adjustment	10.36%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.54%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.27%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.81%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	9.82%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.50%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.50%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	9.82%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.50%	13.57%
b. Tier 1/Tier 2 UAL rate	(2.81%)	(4.38%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	9.82%	9.32%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	48,340	0	48,340
Tier 1/Tier 2 valuation payroll	48,340	0	48,340
OPSRP valuation payroll	125,019	0	125,019
Combined valuation payroll	**$173,359**	**$0**	**$173,359**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	3	4	0	1	3	4
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	3	4	0	1	3	4
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	0	1	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	0	1	N/A	1
Dormant Members								
General Service	1	0	1	2	1	0	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	0	1	2
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**2**	**2**	**4**	**8**	**2**	**2**	**4**	**8**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1							**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	62
60-64		
65-69		
70-74		
75+		
Total	1	62

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	688
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	688

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Canyonville/2149
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Canyonville/2149

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Canyonville -- #2149

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Canyonville to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Canyonville.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Canyonville

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.29%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.15%)	(0.15%)	(0.15%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.74%**	**7.81%**	**11.91%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.30%**	**8.29%**	**12.39%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 77%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.14%	10.14%
Minimum July 1, 2015 Rate	7.14%	4.14%
Maximum July 1, 2015 Rate	13.14%	16.14%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,579,595	$1,425,168	($154,427)	111%	$303,589	(51%)
12/31/2008	1,112,505	1,482,576	370,071	75%	270,288	137%
12/31/2009	1,203,798	1,536,571	332,773	78%	334,911	99%
12/31/2010	1,263,089	1,602,219	339,130	79%	340,758	100%
12/31/2011	1,221,583	1,673,061	451,478	73%	309,713	146%
12/31/2012	1,333,888	1,724,348	390,460	77%	314,703	124%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Canyonville

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$390,460	$451,478
Allocated pooled OPSRP UAL	22,181	5,284
Side account	0	0
Net unfunded pension actuarial accrued liability	412,641	456,762
Combined valuation payroll	314,703	309,713
Net pension UAL as a percentage of payroll	131%	147%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$6,603	$8,023

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$24,235	$19,259
Tier 1/Tier 2 valuation payroll	182,310	179,001
Tier 1/Tier 2 pension normal cost rate	13.29%	10.76%
Tier 1/ Tier 2 Actuarial accrued liability	$1,724,348	$1,673,061
Actuarial asset value	1,333,888	1,221,583
Tier 1/Tier 2 Unfunded actuarial accrued liability	390,460	451,478
Tier 1/ Tier 2 Funded status	77%	73%
Combined valuation payroll	$314,703	$309,713
Tier 1/Tier 2 UAL as a percentage of payroll	124%	146%
Tier 1/Tier 2 UAL rate	(0.15%)	3.78%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	4	4
Tier 1/Tier 2 dormant members	3	2
Tier 1/Tier 2 retirees and beneficiaries	21	20

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	314,703	309,713
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$106,372	$106,879
2. Employer reserves	636,066	556,356
3. Benefits in force reserve	591,450	558,348
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,333,888**	**$1,221,583**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,221,583
2. Regular employer contributions	14,611
3. Benefit payments and expenses	(92,891)
4. Adjustments [2]	23,277
5. Interest credited	167,309
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,333,888**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	7,840	2,321
Tier 2 Police & Fire	0	0
Tier 2 General Service	16,395	16,938
Total	**$24,235**	**$19,259**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$20,322	$24,235	$3,913

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$11,391	$11,735
▪ Tier 1 General Service	36,176	57,963
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	480,741	393,002
▪ **Total Active Members**	**$528,308**	**$462,700**
Dormant Members	199,365	194,872
Retired Members and Beneficiaries	996,675	1,015,489
Total Actuarial Accrued Liability	**$1,724,348**	**$1,673,061**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,753,385	$1,724,348	($29,037)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,724,348	$1,673,061
2. Actuarial value of assets	1,333,888	1,221,583
3. Unfunded accrued liability *(1. – 2.)*	390,460	451,478
4. Funded percentage *(2. ÷ 1.)*	77%	73%
5. Combined valuation payroll	$314,703	$309,713
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	124%	146%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$390,460	$28,261
Total				**$390,460**	**$28,261**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,673,061
b. Normal cost at December 31, 2011	19,259
c. Benefit payments during 2012	(92,164)
d. Interest at 8.0% to December 31, 2012	131,699
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,731,855
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(29,037)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,702,818
2. Actuarial accrued liability at December 31, 2012	1,724,348
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(21,530)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,221,583
b. Contributions for 2012[1]	14,611
c. Benefit payments and expenses during 2012	(92,891)
d. Interest at 8.0% to December 31, 2012	94,595
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,237,898
5. Actuarial value of assets at December 31, 2012	1,333,888
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	95,990
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$74,460**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$451,478**
2. Expected increase	42,479
3. Liability (gain)/loss	21,530
4. Asset (gain)/loss	(95,990)
5. Change due to changes in assumptions, methods, and plan provisions	(29,037)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$390,460**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	7,840	56,374	13.91%	2,321	55,589	4.18%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	16,395	125,936	13.02%	16,938	123,412	13.72%
Total	**$24,235**	**$182,310**	**13.29%**	**$19,259**	**$179,001**	**10.76%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$390,460	$451,478
2. Next year's Tier 1/Tier 2 UAL payment	28,261	34,118
3. Combined valuation payroll	314,703	309,713
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	8.98%	11.02%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.29%	10.76%
b. Tier 1/Tier 2 UAL rate	8.98%	11.02%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	22.40%	21.91%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.14%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.14%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.03%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	77%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.14%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.14%
7. July 1, 2015 total pension rate, before adjustment	22.40%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(9.26%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	8.98%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.28%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.14%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.29%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.29%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.14%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.29%	10.76%
b. Tier 1/Tier 2 UAL rate	(0.28%)	3.65%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.14%	14.54%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$56,374	$0	$56,374
Tier 2	125,936	0	125,936
Tier 1/Tier 2 valuation payroll	182,310	0	182,310
OPSRP valuation payroll	132,393	0	132,393
Combined valuation payroll	**$314,703**	**$0**	**$314,703**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	3	4	8	1	3	4	8
Police & Fire	0	0	0	0	0	0	0	0
Total	1	3	4	8	1	3	4	8
Active Members with previous service segments with the employer								
General Service	1	5	N/A	6	5	5	N/A	10
Police & Fire	1	0	N/A	1	1	0	N/A	1
Total	2	5	N/A	7	6	5	N/A	11
Dormant Members								
General Service	2	1	1	4	1	1	1	3
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	1	4	1	1	1	3
Retired Members and Beneficiaries								
General Service	12	1	0	13	11	1	0	12
Police & Fire	8	0	0	8	8	0	0	8
Total	20	1	0	21	19	1	0	20
Grand Total Number of Members	**25**	**10**	**5**	**40**	**27**	**10**	**5**	**42**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1	1						**2**
60-64			1	1						**2**
65-69										
70-74										
75+										
Total	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**4**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	3	472
60-64		
65-69		
70-74		
75+		
Total	3	472

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	1	90
45-49		
50-54		
55-59	2	156
60-64	2	161
65-69	2	214
70-74	3	592
75-79	7	398
80-84	3	871
85-89	1	233
90-94		
95-99		
100+		
Total	21	408

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Bend/2107
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
City of Bend/2107

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Bend -- #2107

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Bend to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Bend.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Bend

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.19%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.21%	4.21%	4.21%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	(3.19%)	(3.19%)	(3.19%)
Net pension contribution rate	**15.81%**	**8.98%**	**13.08%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**16.37%**	**9.46%**	**13.56%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 83%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	15.33%	15.33%
Minimum July 1, 2015 Rate	12.26%	9.19%
Maximum July 1, 2015 Rate	18.40%	21.47%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$123,895,049	$110,585,933	($13,309,116)	112%	$31,627,544	(42%)
12/31/2008	93,975,721	113,200,430	19,224,709	83%	30,478,644	63%
12/31/2009	107,912,057	121,599,417	13,687,359	89%	30,492,774	45%
12/31/2010	116,318,438	128,704,772	12,386,334	90%	31,485,779	39%
12/31/2011	113,904,241	132,422,315	18,518,073	86%	31,464,101	59%
12/31/2012	126,057,712	137,537,729	11,480,017	92%	32,558,682	35%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Bend

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$23,181,695	$29,588,331
Allocated pooled OPSRP UAL	2,294,826	536,852
Side account	11,701,678	11,070,258
Net unfunded pension actuarial accrued liability	13,774,843	19,054,925
Combined valuation payroll	32,558,682	31,464,101
Net pension UAL as a percentage of payroll	42%	61%
Calculated side account rate relief	(3.19%)	(3.03%)
Allocated pooled RHIA UAL	$683,095	$815,093

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$2,951,034	$2,566,109
Tier 1/Tier 2 valuation payroll	20,798,540	21,207,504
Tier 1/Tier 2 pension normal cost rate	14.19%	12.10%
Tier 1/ Tier 2 Actuarial accrued liability	$137,537,729	$132,422,315
Actuarial asset value	114,356,034	102,833,984
Tier 1/Tier 2 Unfunded actuarial accrued liability	23,181,695	29,588,331
Tier 1/ Tier 2 Funded status	83%	78%
Combined valuation payroll	$32,558,682	$31,464,101
Tier 1/Tier 2 UAL as a percentage of payroll	71%	94%
Tier 1/Tier 2 UAL rate	4.21%	6.91%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	255	265
Tier 1/Tier 2 dormant members	90	84
Tier 1/Tier 2 retirees and beneficiaries	228	211

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**	**$11,070,258**	**$11,070,258**
2. Deposits made during 2012		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2012		(930,506)	(930,506)
5. Side account earnings during 2012		1,562,926	1,562,926
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***		**$11,701,678**	**$11,701,678**

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$11,701,678	$11,070,258
Side account 2	0	0
Side account 3	0	0
Total	**$11,701,678**	**$11,070,258**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$11,701,678	$11,070,258
2. Combined valuation payroll	32,558,682	31,464,101
3. Amortization factor	11.272	11.626
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	(3.19%)	(3.03%)

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$16,739,745	$15,703,577
2. Employer reserves	56,096,317	49,425,682
3. Benefits in force reserve	41,519,973	37,704,725
4. Total market value of assets ***(1. + 2. + 3.)***	**$114,356,034**	**$102,833,984**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$102,833,984
2. Regular employer contributions	2,627,948
3. Benefit payments and expenses	(6,521,006)
4. Adjustments [2]	458,350
5. Interest credited	14,026,253
6. Total transferred from side accounts	930,506
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$114,356,034**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$962,123	$974,786
Tier 1 General Service	513,985	261,693
Tier 2 Police & Fire	830,194	748,125
Tier 2 General Service	644,732	581,505
Total	**$2,951,034**	**$2,566,109**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$2,583,810	$2,951,034	$367,224

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$26,048,196	$27,257,347
▪ Tier 1 General Service	10,064,241	12,257,880
▪ Tier 2 Police & Fire	10,261,728	7,237,837
▪ Tier 2 General Service	9,544,451	6,746,595
▪ **Total Active Members**	**$55,918,616**	**$53,499,659**
Dormant Members	11,652,226	10,347,709
Retired Members and Beneficiaries	69,966,887	68,574,947
Total Actuarial Accrued Liability	**$137,537,729**	**$132,422,315**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$140,228,278	$137,537,729	($2,690,549)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$137,537,729	$132,422,315
2. Actuarial value of assets	114,356,034	102,833,984
3. Unfunded accrued liability *(1. – 2.)*	23,181,695	29,588,331
4. Funded percentage *(2. ÷ 1.)*	83%	78%
5. Combined valuation payroll	$32,558,682	$31,464,101
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	71%	94%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$23,181,695	$1,677,888
Total				**$23,181,695**	**$1,677,888**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$132,422,315
b. Normal cost at December 31, 2011	2,566,109
c. Benefit payments during 2012	(6,469,960)
d. Interest at 8.0% to December 31, 2012	10,540,276
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	139,058,740
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(2,690,549)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	136,368,191
2. Actuarial accrued liability at December 31, 2012	137,537,729
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(1,169,538)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	102,833,984
b. Contributions for 2012[1]	3,558,454
c. Benefit payments and expenses during 2012	(6,521,006)
d. Interest at 8.0% to December 31, 2012	8,108,217
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	107,979,648
5. Actuarial value of assets at December 31, 2012	114,356,034
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	6,376,386
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$5,206,848**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$29,588,331**
2. Expected increase	1,490,761
3. Liability (gain)/loss	1,169,538
4. Asset (gain)/loss	(6,376,386)
5. Change due to changes in assumptions, methods, and plan provisions	(2,690,549)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$23,181,695**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$962,123	$5,345,661	18.00%	$974,786	$5,982,601	16.29%
Tier 1 General Service	513,985	3,745,811	13.72%	261,693	3,951,582	6.62%
Tier 2 Police & Fire	830,194	5,486,022	15.13%	748,125	5,372,610	13.92%
Tier 2 General Service	644,732	6,221,046	10.36%	581,505	5,900,711	9.85%
Total	**$2,951,034**	**$20,798,540**	**14.19%**	**$2,566,109**	**$21,207,504**	**12.10%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$23,181,695	$29,588,331
2. Next year's Tier 1/Tier 2 UAL payment	1,677,888	2,328,847
3. Combined valuation payroll	32,558,682	31,464,101
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.15%	7.40%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.19%	12.10%
b. Tier 1/Tier 2 UAL rate	5.15%	7.40%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.47%	19.63%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.30%
2. Employer contribution rate attributable to side accounts	(3.03%)
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.33%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.07%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.07%
c. Funded percentage	83%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.07%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.26%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	18.40%
7. July 1, 2015 total pension rate, before adjustment	19.47%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.07%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	5.15%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.08%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	18.40%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.19%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.19%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	18.40%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.19%	12.10%
b. Tier 1/Tier 2 UAL rate	4.08%	6.78%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	18.40%	19.01%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$3,745,811	$5,345,661	$9,091,472
Tier 2	6,221,046	5,486,022	11,707,068
Tier 1/Tier 2 valuation payroll	9,966,857	10,831,683	20,798,540
OPSRP valuation payroll	8,134,948	3,625,194	11,760,142
Combined valuation payroll	**$18,101,805**	**$14,456,877**	**$32,558,682**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	48	94	133	275	56	91	121	268
Police & Fire	53	60	42	155	59	59	40	158
Total	101	154	175	430	115	150	161	426
Active Members with previous service segments with the employer								
General Service	9	11	N/A	20	19	19	N/A	38
Police & Fire	5	2	N/A	7	10	4	N/A	14
Total	14	13	N/A	27	29	23	N/A	52
Dormant Members								
General Service	44	31	10	85	37	32	8	77
Police & Fire	12	3	2	17	11	4	1	16
Total	56	34	12	102	48	36	9	93
Retired Members and Beneficiaries								
General Service	117	15	1	133	107	13	1	121
Police & Fire	96	0	0	96	91	0	0	91
Total	213	15	1	229	198	13	1	212
Grand Total Number of Members	**384**	**216**	**188**	**788**	**390**	**222**	**171**	**783**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		8	8							**16**
35-39		11	37	4						**52**
40-44		7	24	15	2					**48**
45-49		2	13	12	12					**39**
50-54		5	9	7	11	5	4			**41**
55-59		4	8	9	6	5	3			**35**
60-64		1	7	3	4	1	1			**17**
65-69		1	2	2	1				1	**7**
70-74										
75+										
Total	**0**	**39**	**108**	**52**	**36**	**11**	**8**	**0**	**1**	**255**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	4	226
35-39	4	1,089
40-44	11	2,053
45-49	18	1,201
50-54	19	1,830
55-59	19	1,146
60-64	10	1,432
65-69	4	1,867
70-74		
75+	1	4
Total	90	1,420

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	4	1,012
45-49	1	3,651
50-54	5	3,240
55-59	25	2,526
60-64	61	2,751
65-69	44	1,991
70-74	39	2,306
75-79	22	1,849
80-84	14	1,405
85-89	9	898
90-94	4	569
95-99		
100+		
Total	228	2,207

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Beaverton/2106
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Beaverton/2106

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Beaverton/2106

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Beaverton -- #2106

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Beaverton to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Beaverton.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Beaverton

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.47%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.85%)	(0.85%)	(0.85%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.22%**	**7.11%**	**11.21%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.78%**	**7.59%**	**11.69%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 88%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.62%	10.62%
Minimum July 1, 2015 Rate	7.62%	4.62%
Maximum July 1, 2015 Rate	13.62%	16.62%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$163,532,200	$150,054,556	($13,477,644)	109%	$26,663,695	(51%)
12/31/2008	124,870,860	156,712,907	31,842,047	80%	28,710,908	111%
12/31/2009	141,726,062	165,397,635	23,671,573	86%	31,185,880	76%
12/31/2010	152,182,765	174,931,684	22,748,919	87%	32,532,597	70%
12/31/2011	146,862,259	181,185,933	34,323,674	81%	32,648,286	105%
12/31/2012	159,589,702	181,388,229	21,798,527	88%	34,468,039	63%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Beaverton

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$21,798,527	$34,323,674
Allocated pooled OPSRP UAL	2,429,402	557,057
Side account	0	0
Net unfunded pension actuarial accrued liability	24,227,929	34,880,731
Combined valuation payroll	34,468,039	32,648,286
Net pension UAL as a percentage of payroll	70%	107%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$723,154	$845,770

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$3,057,468	$2,314,011
Tier 1/Tier 2 valuation payroll	21,123,649	21,256,215
Tier 1/Tier 2 pension normal cost rate	14.47%	10.89%
Tier 1/ Tier 2 Actuarial accrued liability	$181,388,229	$181,185,933
Actuarial asset value	159,589,702	146,862,259
Tier 1/Tier 2 Unfunded actuarial accrued liability	21,798,527	34,323,674
Tier 1/ Tier 2 Funded status	88%	81%
Combined valuation payroll	$34,468,039	$32,648,286
Tier 1/Tier 2 UAL as a percentage of payroll	63%	105%
Tier 1/Tier 2 UAL rate	(0.85%)	2.73%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	286	298
Tier 1/Tier 2 dormant members	150	150
Tier 1/Tier 2 retirees and beneficiaries	350	334

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	34,468,039	32,648,286
3. Amortization factor	11.272	0.000
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$27,937,228	$27,026,021
2. Employer reserves	74,804,458	66,687,382
3. Benefits in force reserve	56,848,016	53,148,856
4. Total market value of assets *(1. + 2. + 3.)*	**$159,589,702**	**$146,862,259**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$146,862,259
2. Regular employer contributions	2,262,995
3. Benefit payments and expenses	(8,928,384)
4. Adjustments[2]	259,441
5. Interest credited	19,133,391
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$159,589,702**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$531,601	$529,707
Tier 1 General Service	1,060,184	363,255
Tier 2 Police & Fire	627,469	573,611
Tier 2 General Service	838,214	847,438
Total	**$3,057,468**	**$2,314,011**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$2,381,781	$3,057,468	$675,687

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$14,273,001	$16,395,605
▪ Tier 1 General Service	33,259,506	37,362,024
▪ Tier 2 Police & Fire	8,831,377	6,092,736
▪ Tier 2 General Service	14,272,033	10,995,197
▪ **Total Active Members**	**$70,635,917**	**$70,845,562**
Dormant Members	14,955,555	13,676,626
Retired Members and Beneficiaries	95,796,757	96,663,745
Total Actuarial Accrued Liability	**$181,388,229**	**$181,185,933**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$189,486,570	$181,388,229	($8,098,341)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$181,388,229	$181,185,933
2. Actuarial value of assets	159,589,702	146,862,259
3. Unfunded accrued liability *(1. – 2.)*	21,798,527	34,323,674
4. Funded percentage *(2. ÷ 1.)*	88%	81%
5. Combined valuation payroll	$34,468,039	$32,648,286
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	63%	105%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$21,798,527	$1,577,774
Total				**$21,798,527**	**$1,577,774**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$181,185,933
b. Normal cost at December 31, 2011	2,314,011
c. Benefit payments during 2012	(8,858,493)
d. Interest at 8.0% to December 31, 2012	14,325,656
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	188,967,107
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(8,098,341)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	180,868,766
2. Actuarial accrued liability at December 31, 2012	181,388,229
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(519,463)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	146,862,259
b. Contributions for 2012[1]	2,262,995
c. Benefit payments and expenses during 2012	(8,928,384)
d. Interest at 8.0% to December 31, 2012	11,482,365
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	151,679,236
5. Actuarial value of assets at December 31, 2012	159,589,702
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	7,910,466
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$7,391,003**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$34,323,674**
2. Expected increase	2,964,197
3. Liability (gain)/loss	519,463
4. Asset (gain)/loss	(7,910,466)
5. Change due to changes in assumptions, methods, and plan provisions	(8,098,341)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$21,798,527**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$531,601	$3,003,015	17.70%	$529,707	$3,144,565	16.85%
Tier 1 General Service	1,060,184	6,450,697	16.44%	363,255	6,426,167	5.65%
Tier 2 Police & Fire	627,469	4,123,650	15.22%	573,611	3,963,395	14.47%
Tier 2 General Service	838,214	7,546,287	11.11%	847,438	7,722,088	10.97%
Total	**$3,057,468**	**$21,123,649**	**14.47%**	**$2,314,011**	**$21,256,215**	**10.89%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$21,798,527	$34,323,674
2. Next year's Tier 1/Tier 2 UAL payment	1,577,774	2,550,411
3. Combined valuation payroll	34,468,039	32,648,286
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.58%	7.81%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.47%	10.89%
b. Tier 1/Tier 2 UAL rate	4.58%	7.81%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.18%	18.83%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.62%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.62%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.12%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	88%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.62%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.62%
7. July 1, 2015 total pension rate, before adjustment	19.18%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.56%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.58%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.98%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.62%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.47%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.47%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.47%	10.89%
b. Tier 1/Tier 2 UAL rate	(0.98%)	2.60%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.62%	13.62%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$6,450,697	$3,003,015	$9,453,712
Tier 2	7,546,287	4,123,650	11,669,937
Tier 1/Tier 2 valuation payroll	13,996,984	7,126,665	21,123,649
OPSRP valuation payroll	8,707,874	4,636,516	13,344,390
Combined valuation payroll	**$22,704,858**	**$11,763,181**	**$34,468,039**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	91	119	169	379	95	127	141	363
Police & Fire	31	45	62	138	32	44	58	134
Total	122	164	231	517	127	171	199	497
Active Members with previous service segments with the employer								
General Service	63	42	N/A	105	80	50	N/A	130
Police & Fire	10	5	N/A	15	14	7	N/A	21
Total	73	47	N/A	120	94	57	N/A	151
Dormant Members								
General Service	73	55	9	137	72	57	9	138
Police & Fire	15	7	2	24	14	7	2	23
Total	88	62	11	161	86	64	11	161
Retired Members and Beneficiaries								
General Service	212	27	3	242	208	21	0	229
Police & Fire	106	5	0	111	101	4	0	105
Total	318	32	3	353	309	25	0	334
Grand Total Number of Members	**601**	**305**	**245**	**1,151**	**616**	**317**	**210**	**1,143**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29		1								**1**
30-34	1	4	6							**11**
35-39		7	20	1						**28**
40-44		6	21	19	5					**51**
45-49		1	24	12	12	4				**53**
50-54		5	17	11	8	9	2			**52**
55-59		2	9	13	6	6	6			**42**
60-64		3	10	16	5	1	3			**38**
65-69		3	5		1	1				**10**
70-74										
75+										
Total	**1**	**32**	**112**	**72**	**37**	**21**	**11**	**0**	**0**	**286**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	1	129
35-39	9	514
40-44	18	1,066
45-49	25	1,124
50-54	31	1,182
55-59	35	1,142
60-64	23	879
65-69	6	716
70-74	1	671
75+	1	5
Total	150	1,026

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	2	2,602
45-49	2	3,562
50-54	11	2,782
55-59	43	2,859
60-64	74	2,270
65-69	91	1,893
70-74	69	1,541
75-79	30	1,482
80-84	15	909
85-89	9	692
90-94	4	679
95-99		
100+		
Total	350	1,941

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

City of Athena/2167
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
City of Athena/2167

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
City of Athena/2167

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES
RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS
City of Athena -- #2167

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for City of Athena to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Athena.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for City of Athena

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	9.40%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(2.22%)	(2.22%)	(2.22%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**7.78%**	**5.74%**	**9.84%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**8.34%**	**6.22%**	**10.32%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 108%.

Funded Status as of December 31, 2013	**70% to 130%**	**Under 60% or Over 140%**
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,500,409	$1,162,854	($337,555)	129%	$212,677	(159%)
12/31/2008	1,076,023	1,190,413	114,390	90%	266,144	43%
12/31/2009	1,219,634	1,196,140	(23,494)	102%	224,568	(10%)
12/31/2010	1,308,772	1,215,902	(92,870)	108%	286,337	(32%)
12/31/2011	1,296,055	1,269,742	(26,313)	102%	272,640	(10%)
12/31/2012	1,436,547	1,326,518	(110,029)	108%	338,455	(33%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

City of Athena

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($110,029)	($26,313)
Allocated pooled OPSRP UAL	23,855	4,652
Side account	0	0
Net unfunded pension actuarial accrued liability	(86,174)	(21,661)
Combined valuation payroll	338,455	272,640
Net pension UAL as a percentage of payroll	(25%)	(8%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$7,101	$7,063

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$17,768	$11,514
Tier 1/Tier 2 valuation payroll	189,029	154,621
Tier 1/Tier 2 pension normal cost rate	9.40%	7.45%
Tier 1/ Tier 2 Actuarial accrued liability	$1,326,518	$1,269,742
Actuarial asset value	1,436,547	1,296,055
Tier 1/Tier 2 Unfunded actuarial accrued liability	(110,029)	(26,313)
Tier 1/ Tier 2 Funded status	108%	102%
Combined valuation payroll	$338,455	$272,640
Tier 1/Tier 2 UAL as a percentage of payroll	(33%)	(10%)
Tier 1/Tier 2 UAL rate	(2.22%)	(1.52%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	4	4
Tier 1/Tier 2 dormant members	3	3
Tier 1/Tier 2 retirees and beneficiaries	4	4

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	338,455	272,640
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$170,161	$149,159
2. Employer reserves	806,523	697,370
3. Benefits in force reserve	459,863	449,527
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,436,547**	**$1,296,055**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,296,055
2. Regular employer contributions	8,174
3. Benefit payments and expenses	(72,225)
4. Adjustments[2]	30,620
5. Interest credited	173,922
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,436,547**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$7,087	$3,210
Tier 1 General Service	3,077	3,776
Tier 2 Police & Fire	0	0
Tier 2 General Service	7,604	4,528
Total	**$17,768**	**$11,514**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$17,095	$17,768	$673

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$197,684	$170,981
▪ Tier 1 General Service	67,686	53,351
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	141,930	86,706
▪ **Total Active Members**	**$407,300**	**$311,038**
Dormant Members	144,285	141,134
Retired Members and Beneficiaries	774,933	817,570
Total Actuarial Accrued Liability	**$1,326,518**	**$1,269,742**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,330,779	$1,326,518	($4,261)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,326,518	$1,269,742
2. Actuarial value of assets	1,436,547	1,296,055
3. Unfunded accrued liability *(1. – 2.)*	(110,029)	(26,313)
4. Funded percentage *(2. ÷ 1.)*	108%	102%
5. Combined valuation payroll	$338,455	$272,640
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(33%)	(10%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($110,029)	($7,964)
Total				**($110,029)**	**($7,964)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,269,742
b. Normal cost at December 31, 2011	11,514
c. Benefit payments during 2012	(71,659)
d. Interest at 8.0% to December 31, 2012	99,634
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,309,231
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(4,261)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,304,970
2. Actuarial accrued liability at December 31, 2012	1,326,518
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(21,548)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,296,055
b. Contributions for 2012[1]	8,174
c. Benefit payments and expenses during 2012	(72,225)
d. Interest at 8.0% to December 31, 2012	101,122
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	1,333,127
5. Actuarial value of assets at December 31, 2012	1,436,547
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	103,419
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$81,871**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($26,313)**
2. Expected increase	2,416
3. Liability (gain)/loss	21,548
4. Asset (gain)/loss	(103,419)
5. Change due to changes in assumptions, methods, and plan provisions	(4,261)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($110,029)**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$7,087	$61,869	11.45%	$3,210	$57,793	5.55%
Tier 1 General Service	3,077	32,552	9.45%	3,776	30,945	12.20%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	7,604	94,608	8.04%	4,528	65,883	6.87%
Total	**$17,768**	**$189,029**	**9.40%**	**$11,514**	**$154,621**	**7.45%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($110,029)	($26,313)
2. Next year's Tier 1/Tier 2 UAL payment	(7,964)	(4,485)
3. Combined valuation payroll	338,455	272,640
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.35%)	(1.65%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.40%	7.45%
b. Tier 1/Tier 2 UAL rate	(2.35%)	(1.65%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	7.18%	5.93%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	108%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	7.18%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(2.35%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.35%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	7.18%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	9.40%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	9.40%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	7.18%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	9.40%	7.45%
b. Tier 1/Tier 2 UAL rate	(2.35%)	(1.65%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	7.18%	5.93%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$32,552	$61,869	$94,421
Tier 2	94,608	0	94,608
Tier 1/Tier 2 valuation payroll	127,160	61,869	189,029
OPSRP valuation payroll	101,544	47,882	149,426
Combined valuation payroll	**$228,704**	**$109,751**	**$338,455**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	2	2	5	1	2	3	6
Police & Fire	1	0	1	2	1	0	1	2
Total	2	2	3	7	2	2	4	8
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	1	N/A	1
Police & Fire	0	0	N/A	0	2	0	N/A	2
Total	0	0	N/A	0	2	1	N/A	3
Dormant Members								
General Service	1	2	1	4	1	2	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	2	1	4	1	2	0	3
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	1	1	0	2	1	1	0	2
Total	3	1	0	4	3	1	0	4
Grand Total Number of Members	**6**	**5**	**4**	**15**	**8**	**6**	**4**	**18**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							**1**
45-49			2							**2**
50-54										
55-59										
60-64				1						**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**4**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	1,931
50-54	1	374
55-59		
60-64		
65-69		
70-74		
75+	1	67
Total	3	791

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	5
60-64	1	3,365
65-69	1	1,367
70-74		
75-79		
80-84		
85-89	1	362
90-94		
95-99		
100+		
Total	4	1,275

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Chiloquin Agency Lake Rural Fire Protection District/2645
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Chiloquin Agency Lake Rural Fire Protection District/2645

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Chiloquin Agency Lake Rural Fire Protection District/2645

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Chiloquin Agency Lake Rural Fire Protection District -- #2645

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Chiloquin Agency Lake Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Chiloquin Agency Lake Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Chiloquin Agency Lake Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	18.47%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(4.96%)	(4.96%)	(4.96%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.11%**	**3.00%**	**7.10%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**14.67%**	**3.48%**	**7.58%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 93%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	10.51%	10.51%
Minimum July 1, 2015 Rate	7.51%	4.51%
Maximum July 1, 2015 Rate	13.51%	16.51%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$228,927	$261,506	$32,579	88%	$79,662	41%
12/31/2008	183,842	294,434	110,592	62%	89,104	124%
12/31/2009	225,758	274,252	48,494	82%	91,355	53%
12/31/2010	261,306	306,711	45,405	85%	94,590	48%
12/31/2011	279,554	332,887	53,333	84%	94,119	57%
12/31/2012	334,249	359,616	25,367	93%	98,398	26%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Chiloquin Agency Lake Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$25,367	$53,333
Allocated pooled OPSRP UAL	6,935	1,606
Side account	0	0
Net unfunded pension actuarial accrued liability	32,302	54,939
Combined valuation payroll	98,398	94,119
Net pension UAL as a percentage of payroll	33%	58%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,064	$2,438

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$18,171	$7,733
Tier 1/Tier 2 valuation payroll	98,398	94,119
Tier 1/Tier 2 pension normal cost rate	18.47%	8.22%
Tier 1/ Tier 2 Actuarial accrued liability	$359,616	$332,887
Actuarial asset value	334,249	279,554
Tier 1/Tier 2 Unfunded actuarial accrued liability	25,367	53,333
Tier 1/ Tier 2 Funded status	93%	84%
Combined valuation payroll	$98,398	$94,119
Tier 1/Tier 2 UAL as a percentage of payroll	26%	57%
Tier 1/Tier 2 UAL rate	(4.96%)	4.79%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	98,398	94,119
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$74,912	$64,829
2. Employer reserves	259,337	214,725
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$334,249**	**$279,554**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$279,554
2.	Regular employer contributions	12,121
3.	Benefit payments and expenses	0
4.	Adjustments[2]	3,437
5.	Interest credited	39,137
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$334,249**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$15,268	$6,121
Tier 1 General Service	179	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	2,724	1,612
Total	**$18,171**	**$7,733**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$8,485	$18,171	$9,686

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$314,212	$297,641
▪ Tier 1 General Service	5,499	7,893
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	18,182	6,014
▪ **Total Active Members**	**$337,893**	**$311,548**
Dormant Members	21,723	21,339
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$359,616**	**$332,887**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$362,727	$359,616	($3,111)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$359,616	$332,887
2. Actuarial value of assets	334,249	279,554
3. Unfunded accrued liability *(1. – 2.)*	25,367	53,333
4. Funded percentage *(2. ÷ 1.)*	93%	84%
5. Combined valuation payroll	$98,398	$94,119
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	26%	57%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$25,367	$1,836
Total				**$25,367**	**$1,836**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$332,887
b. Normal cost at December 31, 2011	7,733
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	27,250
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	367,870
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(3,111)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	364,759
2. Actuarial accrued liability at December 31, 2012	359,616
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	5,143
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	279,554
b. Contributions for 2012[1]	12,121
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	22,849
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	314,524
5. Actuarial value of assets at December 31, 2012	334,249
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	19,725
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$24,868**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$53,333**
2. Expected increase	13
3. Liability (gain)/loss	(5,143)
4. Asset (gain)/loss	(19,725)
5. Change due to changes in assumptions, methods, and plan provisions	(3,111)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$25,367**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$15,268	$66,257	23.04%	$6,121	$62,765	9.75%
Tier 1 General Service	179	838	21.36%	0	1,058	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	2,724	31,303	8.70%	1,612	30,296	5.32%
Total	**$18,171**	**$98,398**	**18.47%**	**$7,733**	**$94,119**	**8.22%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$25,367	$53,333
2. Next year's Tier 1/Tier 2 UAL payment	1,836	4,382
3. Combined valuation payroll	98,398	94,119
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.87%	4.66%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.47%	8.22%
b. Tier 1/Tier 2 UAL rate	1.87%	4.66%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.47%	13.01%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.51%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.51%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.10%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	93%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.51%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	13.51%
7. July 1, 2015 total pension rate, before adjustment	20.47%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(6.96%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.87%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.09%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	13.51%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	18.47%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	18.47%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.51%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.47%	8.22%
b. Tier 1/Tier 2 UAL rate	(5.09%)	4.66%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	13.51%	13.01%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$838	$66,257	$67,095
Tier 2	31,303	0	31,303
Tier 1/Tier 2 valuation payroll	32,141	66,257	98,398
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$32,141**	**$66,257**	**$98,398**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	1	0	0	1	1	0	0	1
Total	1	1	0	2	1	1	0	2
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	0	N/A	1	1	0	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**3**	**1**	**0**	**4**	**3**	**1**	**0**	**4**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34			1							1
35-39										
40-44										
45-49										
50-54										
55-59							1			1
60-64										
65-69										
70-74										
75+										
Total	0	0	1	0	0	0	1	0	0	2

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	146
60-64		
65-69		
70-74		
75+		
Total	1	146

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Central Oregon Regional Housing Authority/2678
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Central Oregon Regional Housing Authority/2678

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Central Oregon Regional Housing Authority -- #2678

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Central Oregon Regional Housing Authority to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Central Oregon Regional Housing Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Central Oregon Regional Housing Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.17%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(4.76%)	(4.76%)	(4.76%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.01%**	**3.20%**	**7.30%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**9.57%**	**3.68%**	**7.78%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 125%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	5.41%	5.41%
Minimum July 1, 2015 Rate	2.41%	0.00%
Maximum July 1, 2015 Rate	8.41%	11.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$1,765,271	$1,358,750	($406,521)	130%	$713,808	(57%)
12/31/2008	1,388,677	1,405,586	16,909	99%	707,188	2%
12/31/2009	1,673,580	1,552,945	(120,635)	108%	768,732	(16%)
12/31/2010	1,865,855	1,680,739	(185,116)	111%	684,037	(27%)
12/31/2011	1,912,749	1,768,115	(144,634)	108%	812,514	(18%)
12/31/2012	2,154,777	1,718,750	(436,027)	125%	738,745	(59%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Central Oregon Regional Housing Authority

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($436,027)	($144,634)
Allocated pooled OPSRP UAL	52,069	13,863
Side account	0	0
Net unfunded pension actuarial accrued liability	(383,958)	(130,771)
Combined valuation payroll	738,745	812,514
Net pension UAL as a percentage of payroll	(52%)	(16%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$15,499	$21,049

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$28,516	$13,670
Tier 1/Tier 2 valuation payroll	216,552	216,668
Tier 1/Tier 2 pension normal cost rate	13.17%	7.10%
Tier 1/ Tier 2 Actuarial accrued liability	$1,718,750	$1,768,115
Actuarial asset value	2,154,777	1,912,749
Tier 1/Tier 2 Unfunded actuarial accrued liability	(436,027)	(144,634)
Tier 1/ Tier 2 Funded status	125%	108%
Combined valuation payroll	$738,745	$812,514
Tier 1/Tier 2 UAL as a percentage of payroll	(59%)	(18%)
Tier 1/Tier 2 UAL rate	(4.76%)	(1.69%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	9	12
Tier 1/Tier 2 retirees and beneficiaries	7	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	738,745	812,514
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$608,236	$545,103
2. Employer reserves	1,370,924	1,278,421
3. Benefits in force reserve	175,617	89,225
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,154,777**	**$1,912,749**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$1,912,749
2. Regular employer contributions	3,784
3. Benefit payments and expenses	(27,582)
4. Adjustments[2]	12,305
5. Interest credited	253,520
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,154,777**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	20,540	8,019
Tier 2 Police & Fire	0	0
Tier 2 General Service	7,976	5,651
Total	**$28,516**	**$13,670**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$11,788	$28,516	$16,728

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	963,614	1,063,861
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	206,802	130,829
▪ **Total Active Members**	**$1,170,416**	**$1,194,690**
Dormant Members	252,396	411,148
Retired Members and Beneficiaries	295,938	162,277
Total Actuarial Accrued Liability	**$1,718,750**	**$1,768,115**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,921,019	$1,718,750	($202,269)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$1,718,750	$1,768,115
2. Actuarial value of assets	2,154,777	1,912,749
3. Unfunded accrued liability *(1. – 2.)*	(436,027)	(144,634)
4. Funded percentage *(2. ÷ 1.)*	125%	108%
5. Combined valuation payroll	$738,745	$812,514
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(59%)	(18%)

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($436,027)	($31,560)
Total				**($436,027)**	**($31,560)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$1,768,115
b. Normal cost at December 31, 2011	13,670
c. Benefit payments during 2012	(27,366)
d. Interest at 8.0% to December 31, 2012	141,448
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,895,867
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(202,269)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	1,693,598
2. Actuarial accrued liability at December 31, 2012	1,718,750
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(25,152)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	1,912,749
b. Contributions for 2012[1]	3,784
c. Benefit payments and expenses during 2012	(27,582)
d. Interest at 8.0% to December 31, 2012	152,068
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	2,041,020
5. Actuarial value of assets at December 31, 2012	2,154,777
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	113,757
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$88,605**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**($144,634)**
2. Expected increase	(519)
3. Liability (gain)/loss	25,152
4. Asset (gain)/loss	(113,757)
5. Change due to changes in assumptions, methods, and plan provisions	(202,269)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($436,027)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	20,540	133,356	15.40%	8,019	133,408	6.01%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	7,976	83,196	9.59%	5,651	83,260	6.79%
Total	**$28,516**	**$216,552**	**13.17%**	**$13,670**	**$216,668**	**6.31%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($436,027)	($144,634)
2. Next year's Tier 1/Tier 2 UAL payment	(31,560)	(14,749)
3. Combined valuation payroll	738,745	812,514
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(4.27%)	(1.82%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.17%	6.31%
b. Tier 1/Tier 2 UAL rate	(4.27%)	(1.82%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	9.03%	4.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.08%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	125%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.41%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	8.41%
7. July 1, 2015 total pension rate, before adjustment	9.03%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.62%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(4.27%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(4.89%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	8.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.17%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.17%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.17%	7.10%
b. Tier 1/Tier 2 UAL rate	(4.89%)	(1.82%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	8.41%	5.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$133,356	$0	$133,356
Tier 2	83,196	0	83,196
Tier 1/Tier 2 valuation payroll	216,552	0	216,552
OPSRP valuation payroll	522,193	0	522,193
Combined valuation payroll	**$738,745**	**$0**	**$738,745**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	1	10	12	1	1	12	14
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	10	12	1	1	12	14
Active Members with previous service segments with the employer								
General Service	2	2	N/A	4	5	3	N/A	8
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	2	2	N/A	4	5	3	N/A	8
Dormant Members								
General Service	5	4	1	10	5	7	1	13
Police & Fire	0	0	0	0	0	0	0	0
Total	5	4	1	10	5	7	1	13
Retired Members and Beneficiaries								
General Service	5	2	0	7	4	1	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	5	2	0	7	4	1	0	5
Grand Total Number of Members	**13**	**9**	**11**	**33**	**15**	**12**	**13**	**40**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							**1**
40-44										
45-49										
50-54										
55-59						1				**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	0
45-49	2	54
50-54	1	1,523
55-59	2	255
60-64	1	43
65-69	1	163
70-74		
75+	1	452
Total	9	311

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	370
65-69	2	446
70-74	3	141
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	7	294

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Central Oregon Intergovernmental Council/2569
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Central Oregon Intergovernmental Council/2569

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott Preppernau

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Central Oregon Intergovernmental Council -- #2569

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Central Oregon Intergovernmental Council to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Central Oregon Intergovernmental Council.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Central Oregon Intergovernmental Council

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.26%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.44%	0.44%	0.44%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.30%**	**8.40%**	**12.50%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**13.86%**	**8.88%**	**12.98%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 93%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	9.70%	9.70%
Minimum July 1, 2015 Rate	6.70%	3.70%
Maximum July 1, 2015 Rate	12.70%	15.70%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$9,583,547	$8,654,315	($929,232)	111%	$2,546,525	(36%)
12/31/2008	7,252,664	8,694,695	1,442,031	83%	3,047,833	47%
12/31/2009	8,552,656	9,391,954	839,298	91%	3,654,124	23%
12/31/2010	9,331,624	10,220,183	888,559	91%	4,376,107	20%
12/31/2011	8,900,492	10,248,303	1,347,811	87%	4,384,310	31%
12/31/2012	10,203,760	10,991,538	787,778	93%	4,776,592	16%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Central Oregon Intergovernmental Council

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$787,778	$1,347,811
Allocated pooled OPSRP UAL	336,667	74,807
Side account	0	0
Net unfunded pension actuarial accrued liability	1,124,445	1,422,618
Combined valuation payroll	4,776,592	4,384,310
Net pension UAL as a percentage of payroll	24%	32%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$100,215	$113,578

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$260,889	$210,879
Tier 1/Tier 2 valuation payroll	2,127,797	2,113,615
Tier 1/Tier 2 pension normal cost rate	12.26%	9.98%
Tier 1/ Tier 2 Actuarial accrued liability	$10,991,538	$10,248,303
Actuarial asset value	10,203,760	8,900,492
Tier 1/Tier 2 Unfunded actuarial accrued liability	787,778	1,347,811
Tier 1/ Tier 2 Funded status	93%	87%
Combined valuation payroll	$4,776,592	$4,384,310
Tier 1/Tier 2 UAL as a percentage of payroll	16%	31%
Tier 1/Tier 2 UAL rate	0.44%	2.33%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	40	40
Tier 1/Tier 2 dormant members	30	35
Tier 1/Tier 2 retirees and beneficiaries	48	43

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	4,776,592	4,384,310
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,147,062	$1,896,095
2. Employer reserves	5,972,039	5,043,212
3. Benefits in force reserve	2,084,659	1,961,185
4. Total market value of assets ***(1. + 2. + 3.)***	**$10,203,760**	**$8,900,492**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$8,900,492
2.	Regular employer contributions	243,392
3.	Benefit payments and expenses	(327,411)
4.	Adjustments[2]	148,362
5.	Interest credited	1,238,925
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$10,203,760**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	98,502	70,532
Tier 2 Police & Fire	0	0
Tier 2 General Service	162,387	140,347
Total	**$260,889**	**$210,879**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$221,270	$260,889	$39,619

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	3,004,236	2,954,046
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	3,091,937	2,371,794
▪ **Total Active Members**	**$6,096,173**	**$5,325,840**
Dormant Members	1,382,426	1,355,585
Retired Members and Beneficiaries	3,512,939	3,566,878
Total Actuarial Accrued Liability	**$10,991,538**	**$10,248,303**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$11,017,487	$10,991,538	($25,949)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$10,991,538	$10,248,303
2. Actuarial value of assets	10,203,760	8,900,492
3. Unfunded accrued liability *(1. – 2.)*	787,778	1,347,811
4. Funded percentage *(2. ÷ 1.)*	93%	87%
5. Combined valuation payroll	$4,776,592	$4,384,310
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	16%	31%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$787,778	$57,019
Total				**$787,778**	**$57,019**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$10,248,303
b. Normal cost at December 31, 2011	210,879
c. Benefit payments during 2012	(324,848)
d. Interest at 8.0% to December 31, 2012	823,741
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	10,958,075
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(25,949)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	10,932,126
2. Actuarial accrued liability at December 31, 2012	10,991,538
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(59,412)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	8,900,492
b. Contributions for 2012[1]	243,392
c. Benefit payments and expenses during 2012	(327,411)
d. Interest at 8.0% to December 31, 2012	708,679
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	9,525,152
5. Actuarial value of assets at December 31, 2012	10,203,760
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	678,609
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$619,197**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$1,347,811**
2. Expected increase	85,113
3. Liability (gain)/loss	59,412
4. Asset (gain)/loss	(678,609)
5. Change due to changes in assumptions, methods, and plan provisions	(25,949)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$787,778**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	98,502	671,523	14.67%	70,532	804,731	8.76%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	162,387	1,456,274	11.15%	140,347	1,308,884	10.72%
Total	**$260,889**	**$2,127,797**	**12.26%**	**$210,879**	**$2,113,615**	**9.98%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$787,778	$1,347,811
2. Next year's Tier 1/Tier 2 UAL payment	57,019	96,546
3. Combined valuation payroll	4,776,592	4,384,310
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.19%	2.20%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.26%	9.98%
b. Tier 1/Tier 2 UAL rate	1.19%	2.20%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.58%	12.31%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.70%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.70%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.94%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	93%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.70%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	12.70%
7. July 1, 2015 total pension rate, before adjustment	13.58%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.88%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	1.19%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.31%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	12.70%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.26%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.26%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.70%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.26%	9.98%
b. Tier 1/Tier 2 UAL rate	0.31%	2.20%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	12.70%	12.31%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$671,523	$0	$671,523
Tier 2	1,456,274	0	1,456,274
Tier 1/Tier 2 valuation payroll	2,127,797	0	2,127,797
OPSRP valuation payroll	2,648,795	0	2,648,795
Combined valuation payroll	**$4,776,592**	**$0**	**$4,776,592**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	10	30	82	122	13	27	70	110
Police & Fire	0	0	0	0	0	0	0	0
Total	10	30	82	122	13	27	70	110
Active Members with previous service segments with the employer								
General Service	26	13	N/A	39	32	19	N/A	51
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	26	13	N/A	39	32	19	N/A	51
Dormant Members								
General Service	14	16	7	37	14	21	5	40
Police & Fire	0	0	0	0	0	0	0	0
Total	14	16	7	37	14	21	5	40
Retired Members and Beneficiaries								
General Service	45	3	0	48	42	1	0	43
Police & Fire	0	0	0	0	0	0	0	0
Total	45	3	0	48	42	1	0	43
Grand Total Number of Members	**95**	**62**	**89**	**246**	**101**	**68**	**75**	**244**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39		1	1							**2**
40-44			7	3						**10**
45-49	1	2	2							**5**
50-54		1	2	1	2	1				**7**
55-59		1		4	1		1			**7**
60-64			3	4						**7**
65-69			1							**1**
70-74				1						**1**
75+										
Total	**1**	**5**	**16**	**13**	**3**	**1**	**1**	**0**	**0**	**40**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	3	899
45-49	5	813
50-54	6	375
55-59	4	193
60-64	7	490
65-69	2	1,319
70-74	1	144
75+	2	68
Total	30	538

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	1,187
60-64	14	707
65-69	10	566
70-74	13	370
75-79	5	348
80-84	2	1,402
85-89	1	40
90-94	1	86
95-99		
100+		
Total	48	571

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Brownsville Rural Fire Protection District/2779
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Brownsville Rural Fire Protection District/2779

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Brownsville Rural Fire Protection District/2779

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott Preppernau
Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Brownsville Rural Fire Protection District -- #2779

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Brownsville Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Brownsville Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Brownsville Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.08%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(0.04%)	(0.04%)	(0.04%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.64%**	**7.92%**	**12.02%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**17.20%**	**8.40%**	**12.50%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 100%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	13.04%	13.04%
Minimum July 1, 2015 Rate	10.04%	7.04%
Maximum July 1, 2015 Rate	16.04%	19.04%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$304,768	$232,997	($71,771)	131%	$64,448	(111%)
12/31/2008	223,089	250,636	27,547	89%	66,164	42%
12/31/2009	277,778	281,218	3,440	99%	69,979	5%
12/31/2010	316,335	333,084	16,749	95%	75,225	22%
12/31/2011	334,703	375,388	40,685	89%	84,296	48%
12/31/2012	394,320	394,366	46	100%	82,896	0%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Brownsville Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$46	$40,685
Allocated pooled OPSRP UAL	5,843	1,438
Side account	0	0
Net unfunded pension actuarial accrued liability	5,889	42,123
Combined valuation payroll	82,896	84,296
Net pension UAL as a percentage of payroll	7%	50%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,739	$2,184

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$13,331	$13,091
Tier 1/Tier 2 valuation payroll	82,896	84,296
Tier 1/Tier 2 pension normal cost rate	16.08%	15.53%
Tier 1/ Tier 2 Actuarial accrued liability	$394,366	$375,388
Actuarial asset value	394,320	334,703
Tier 1/Tier 2 Unfunded actuarial accrued liability	46	40,685
Tier 1/ Tier 2 Funded status	100%	89%
Combined valuation payroll	$82,896	$84,296
Tier 1/Tier 2 UAL as a percentage of payroll	0%	48%
Tier 1/Tier 2 UAL rate	(0.04%)	0.51%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2012	December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	82,896	84,296
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$84,082	$73,604
2. Employer reserves	310,238	261,099
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$394,320**	**$334,703**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$334,703
2.	Regular employer contributions	10,245
3.	Benefit payments and expenses	0
4.	Adjustments[2]	3,323
5.	Interest credited	46,049
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$394,320**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	13,331	13,091
Tier 2 General Service	0	0
Total	**$13,331**	**$13,091**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$13,155	$13,331	$176

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	**December 31, 2011**
Active Members		
▪ Tier 1 Police & Fire	$224,929	$232,057
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	169,437	143,331
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$394,366**	**$375,388**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$394,366**	**$375,388**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$388,830	$394,366	$5,536

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$394,366	$375,388
2. Actuarial value of assets	394,320	334,703
3. Unfunded accrued liability *(1. – 2.)*	46	40,685
4. Funded percentage *(2. ÷ 1.)*	100%	89%
5. Combined valuation payroll	$82,896	$84,296
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	0%	48%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$46	$3
Total				**$46**	**$3**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$375,388
b. Normal cost at December 31, 2011	13,091
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	31,078
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	419,557
f. Change in actuarial accrued liability due to assumption, method, and plan changes	5,536
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	425,093
2. Actuarial accrued liability at December 31, 2012	394,366
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	30,727
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	334,703
b. Contributions for 2012[1]	10,245
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	27,186
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	372,134
5. Actuarial value of assets at December 31, 2012	394,320
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	22,186
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$52,913**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$40,685**
2. Expected increase	6,738
3. Liability (gain)/loss	(30,727)
4. Asset (gain)/loss	(22,186)
5. Change due to changes in assumptions, methods, and plan provisions	5,536
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$46**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	13,331	82,896	16.08%	13,091	84,296	15.53%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$13,331**	**$82,896**	**16.08%**	**$13,091**	**$84,296**	**15.53%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$46	$40,685
2. Next year's Tier 1/Tier 2 UAL payment	3	2,479
3. Combined valuation payroll	82,896	84,296
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.00%	2.94%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.08%	15.53%
b. Tier 1/Tier 2 UAL rate	0.00%	2.94%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.21%	18.60%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	13.04%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.04%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	2.61%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	100%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5.	July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.04%
6.	July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	16.04%
7.	July 1, 2015 total pension rate, before adjustment	16.21%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.17%)
9.	July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.00%
10.	July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.17%)
11.	July 1, 2015 Tier 1/Tier 2 pension rate, after collar	16.04%
12.	Tier 1/Tier 2 retiree healthcare rate	0.56%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.08%
15.	July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.08%
16.	July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.08%	15.53%
b. Tier 1/Tier 2 UAL rate	(0.17%)	0.38%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	16.04%	16.04%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	82,896	82,896
Tier 1/Tier 2 valuation payroll	0	82,896	82,896
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$82,896**	**$82,896**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	0	1	0	1
Total	0	1	0	1	0	1	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	0	N/A	1	1	0	N/A	1
Total	1	0	N/A	1	1	0	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**1**	**0**	**2**	**1**	**1**	**0**	**2**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54			1							**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Boardman Rural Fire Protection District/2833
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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December 2013
Boardman Rural Fire Protection District/2833

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Boardman Rural Fire Protection District/2833

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Boardman Rural Fire Protection District -- #2833

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Boardman Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Boardman Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Boardman Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.90%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.26%	0.26%	0.26%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.76%**	**8.22%**	**12.32%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.32%**	**8.70%**	**12.80%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 98%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	15.43%	15.43%
Minimum July 1, 2015 Rate	12.34%	9.25%
Maximum July 1, 2015 Rate	18.52%	21.61%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$203,037	$143,783	($59,254)	141%	$176,812	(34%)
12/31/2008	150,740	161,496	10,756	93%	185,182	6%
12/31/2009	188,954	189,184	230	100%	194,424	0%
12/31/2010	219,141	218,028	(1,113)	101%	342,071	0%
12/31/2011	232,340	251,708	19,368	92%	318,829	6%
12/31/2012	279,659	285,777	6,118	98%	336,480	2%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Boardman Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$6,118	$19,368
Allocated pooled OPSRP UAL	23,716	5,440
Side account	0	0
Net unfunded pension actuarial accrued liability	29,834	24,808
Combined valuation payroll	336,480	318,829
Net pension UAL as a percentage of payroll	9%	8%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$7,059	$8,259

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$13,407	$13,230
Tier 1/Tier 2 valuation payroll	79,344	75,642
Tier 1/Tier 2 pension normal cost rate	16.90%	17.49%
Tier 1/ Tier 2 Actuarial accrued liability	$285,777	$251,708
Actuarial asset value	279,659	232,340
Tier 1/Tier 2 Unfunded actuarial accrued liability	6,118	19,368
Tier 1/ Tier 2 Funded status	98%	92%
Combined valuation payroll	$336,480	$318,829
Tier 1/Tier 2 UAL as a percentage of payroll	2%	6%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	0.26%	0.44%
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2012	Actuarial Valuation as of December 31, 2011
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	336,480	318,829
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$37,165	$32,081
2. Employer reserves	242,494	200,259
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$279,659**	**$232,340**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$232,340
2. Regular employer contributions	12,087
3. Benefit payments and expenses	0
4. Adjustments[2]	(305)
5. Interest credited	35,537
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$279,659**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	13,407	13,230
Tier 2 General Service	0	0
Total	**$13,407**	**$13,230**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$14,021	$13,407	($614)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	285,777	251,708
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$285,777**	**$251,708**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$285,777**	**$251,708**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$282,202	$285,777	$3,575

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$285,777	$251,708
2. Actuarial value of assets	279,659	232,340
3. Unfunded accrued liability *(1. – 2.)*	6,118	19,368
4. Funded percentage *(2. ÷ 1.)*	98%	92%
5. Combined valuation payroll	$336,480	$318,829
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	2%	6%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$6,118	$443
Total				**$6,118**	**$443**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$251,708
b. Normal cost at December 31, 2011	13,230
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	21,195
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	286,133
f. Change in actuarial accrued liability due to assumption, method, and plan changes	3,575
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	289,708
2. Actuarial accrued liability at December 31, 2012	285,777
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	3,931
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	232,340
b. Contributions for 2012[1]	12,087
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	19,071
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	263,498
5. Actuarial value of assets at December 31, 2012	279,659
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	16,161
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$20,092**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$19,368**
2. Expected increase	3,267
3. Liability (gain)/loss	(3,931)
4. Asset (gain)/loss	(16,161)
5. Change due to changes in assumptions, methods, and plan provisions	3,575
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$6,118**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	13,407	79,344	16.90%	13,230	75,642	17.49%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$13,407**	**$79,344**	**16.90%**	**$13,230**	**$75,642**	**17.49%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$6,118	$19,368
2. Next year's Tier 1/Tier 2 UAL payment	443	1,001
3. Combined valuation payroll	336,480	318,829
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.13%	0.31%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.90%	17.49%
b. Tier 1/Tier 2 UAL rate	0.13%	0.31%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.16%	17.93%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	15.43%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.43%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.09%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.09%
c. Funded percentage	98%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.09%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.34%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	18.52%
7. July 1, 2015 total pension rate, before adjustment	17.16%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	0.13%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.13%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.16%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.90%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.90%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.16%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.90%	17.49%
b. Tier 1/Tier 2 UAL rate	0.13%	0.31%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.16%	17.93%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	79,344	79,344
Tier 1/Tier 2 valuation payroll	0	79,344	79,344
OPSRP valuation payroll	33,773	223,363	257,136
Combined valuation payroll	**$33,773**	**$302,707**	**$336,480**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	1	5	6	0	1	5	6
Total	0	1	6	7	0	1	6	7
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	1	N/A	1
Total	0	0	N/A	0	0	1	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**1**	**6**	**7**	**0**	**2**	**6**	**8**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1							**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Black Butte Ranch Rural Fire Protection District/2648
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Black Butte Ranch Rural Fire Protection District/2648

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Black Butte Ranch Rural Fire Protection District -- #2648

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Black Butte Ranch Rural Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Black Butte Ranch Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Black Butte Ranch Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.79%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(5.08%)	(5.08%)	(5.08%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.31%**	**2.88%**	**6.98%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.87%**	**3.36%**	**7.46%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 101%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.71%	8.71%
Minimum July 1, 2015 Rate	5.71%	2.71%
Maximum July 1, 2015 Rate	11.71%	14.71%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$3,664,039	$2,761,114	($902,925)	133%	$532,304	(170%)
12/31/2008	2,771,033	2,798,195	27,162	99%	493,884	6%
12/31/2009	3,179,320	3,130,088	(49,232)	102%	518,846	(9%)
12/31/2010	3,440,032	3,355,979	(84,053)	103%	594,334	(14%)
12/31/2011	3,324,045	3,404,058	80,013	98%	618,314	13%
12/31/2012	3,629,332	3,581,851	(47,481)	101%	702,997	(7%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Black Butte Ranch Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	($47,481)	$80,013
Allocated pooled OPSRP UAL	49,549	10,550
Side account	0	0
Net unfunded pension actuarial accrued liability	2,068	90,563
Combined valuation payroll	702,997	618,314
Net pension UAL as a percentage of payroll	0%	15%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$14,749	$16,018

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$55,887	$60,166
Tier 1/Tier 2 valuation payroll	332,788	318,181
Tier 1/Tier 2 pension normal cost rate	16.79%	18.91%
Tier 1/ Tier 2 Actuarial accrued liability	$3,581,851	$3,404,058
Actuarial asset value	3,629,332	3,324,045
Tier 1/Tier 2 Unfunded actuarial accrued liability	(47,481)	80,013
Tier 1/ Tier 2 Funded status	101%	98%
Combined valuation payroll	$702,997	$618,314
Tier 1/Tier 2 UAL as a percentage of payroll	(7%)	13%
Tier 1/Tier 2 UAL rate	(5.08%)	(7.20%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	3	3
Tier 1/Tier 2 retirees and beneficiaries	10	10

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	702,997	618,314
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$479,799	$420,018
2. Employer reserves	2,117,273	1,947,432
3. Benefits in force reserve	1,032,260	956,595
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,629,332**	**$3,324,045**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$3,324,045
2. Regular employer contributions	(452)
3. Benefit payments and expenses	(162,124)
4. Adjustments [2]	29,653
5. Interest credited	438,210
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,629,332**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$36,945	$42,574
Tier 1 General Service	0	0
Tier 2 Police & Fire	18,942	17,592
Tier 2 General Service	0	0
Total	**$55,887**	**$60,166**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$65,483	$55,887	($9,596)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$1,313,400	$1,207,470
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	294,434	230,791
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$1,607,834**	**$1,438,261**
Dormant Members	234,517	226,004
Retired Members and Beneficiaries	1,739,500	1,739,793
Total Actuarial Accrued Liability	**$3,581,851**	**$3,404,058**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$3,708,861	$3,581,851	($127,010)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$3,581,851	$3,404,058
2. Actuarial value of assets	3,629,332	3,324,045
3. Unfunded accrued liability *(1. – 2.)*	(47,481)	80,013
4. Funded percentage *(2. ÷ 1.)*	101%	98%
5. Combined valuation payroll	$702,997	$618,314
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(7%)	13%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	($47,481)	($3,437)
Total				**($47,481)**	**($3,437)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$3,404,058
b. Normal cost at December 31, 2011	60,166
c. Benefit payments during 2012	(160,855)
d. Interest at 8.0% to December 31, 2012	270,704
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,574,073
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(127,010)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	3,447,063
2. Actuarial accrued liability at December 31, 2012	3,581,851
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(134,788)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	3,324,045
b. Contributions for 2012[1]	(452)
c. Benefit payments and expenses during 2012	(162,124)
d. Interest at 8.0% to December 31, 2012	259,421
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	3,420,890
5. Actuarial value of assets at December 31, 2012	3,629,332
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	208,442
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$73,654**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$80,013**
2. Expected increase	73,170
3. Liability (gain)/loss	134,788
4. Asset (gain)/loss	(208,442)
5. Change due to changes in assumptions, methods, and plan provisions	(127,010)
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**($47,481)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$36,945	$223,876	16.50%	$42,574	$213,412	19.95%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	18,942	108,912	17.39%	17,592	104,769	16.79%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$55,887**	**$332,788**	**16.79%**	**$60,166**	**$318,181**	**18.91%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	($47,481)	$80,013
2. Next year's Tier 1/Tier 2 UAL payment	(3,437)	(475)
3. Combined valuation payroll	702,997	618,314
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.49%)	(0.08%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.79%	18.91%
b. Tier 1/Tier 2 UAL rate	(0.49%)	(0.08%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.43%	18.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.71%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.71%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.74%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	101%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.71%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.71%
7. July 1, 2015 total pension rate, before adjustment	16.43%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.72%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	(0.49%)
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.21%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.71%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.79%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.79%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.79%	18.91%
b. Tier 1/Tier 2 UAL rate	(5.21%)	(7.33%)
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.71%	11.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$223,876	$223,876
Tier 2	0	108,912	108,912
Tier 1/Tier 2 valuation payroll	0	332,788	332,788
OPSRP valuation payroll	47,592	322,617	370,209
Combined valuation payroll	**$47,592**	**$655,405**	**$702,997**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	0	0
Police & Fire	2	1	4	7	2	1	4	7
Total	2	1	5	8	2	1	4	7
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	4	2	N/A	6	4	2	N/A	6
Total	4	2	N/A	6	4	2	N/A	6
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	1	0	3	2	1	0	3
Total	2	1	0	3	2	1	0	3
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	9	0	0	9	9	0	0	9
Total	10	0	0	10	10	0	0	10
Grand Total Number of Members	**18**	**4**	**5**	**27**	**18**	**4**	**4**	**26**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44				1						**1**
45-49		1			1					**2**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**3**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	2	1,472
45-49		
50-54	1	636
55-59		
60-64		
65-69		
70-74		
75+		
Total	3	1,193

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	1,440
60-64	2	1,552
65-69	1	2,604
70-74	4	723
75-79	1	96
80-84		
85-89		
90-94		
95-99		
100+		
Total	10	1,157

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Bend Parks & Recreation/2596
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Bend Parks & Recreation/2596

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Bend Parks & Recreation/2596

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Bend Parks & Recreation -- #2596

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Bend Parks & Recreation to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Bend Parks & Recreation.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Bend Parks & Recreation

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.68%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	(1.37%)	(1.37%)	(1.37%)
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.91%**	**6.59%**	**10.69%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**12.47%**	**7.07%**	**11.17%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 89%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	8.31%	8.31%
Minimum July 1, 2015 Rate	5.31%	2.31%
Maximum July 1, 2015 Rate	11.31%	14.31%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$11,473,155	$9,879,326	($1,593,829)	116%	$4,639,861	(34%)
12/31/2008	9,216,475	10,663,648	1,447,173	86%	5,256,904	28%
12/31/2009	10,568,000	11,449,834	881,834	92%	5,573,280	16%
12/31/2010	11,873,968	12,796,796	922,828	93%	5,742,374	16%
12/31/2011	11,574,356	13,624,264	2,049,908	85%	5,084,185	40%
12/31/2012	12,908,743	14,482,667	1,573,924	89%	5,137,769	31%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Bend Parks & Recreation

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$1,573,924	$2,049,908
Allocated pooled OPSRP UAL	362,124	86,748
Side account	0	0
Net unfunded pension actuarial accrued liability	1,936,048	2,136,656
Combined valuation payroll	5,137,769	5,084,185
Net pension UAL as a percentage of payroll	38%	42%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$107,793	$131,708

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
Normal cost	$351,090	$246,705
Tier 1/Tier 2 valuation payroll	2,769,815	2,790,907
Tier 1/Tier 2 pension normal cost rate	12.68%	8.84%
Tier 1/ Tier 2 Actuarial accrued liability	$14,482,667	$13,624,264
Actuarial asset value	12,908,743	11,574,356
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,573,924	2,049,908
Tier 1/ Tier 2 Funded status	89%	85%
Combined valuation payroll	$5,137,769	$5,084,185
Tier 1/Tier 2 UAL as a percentage of payroll	31%	40%
Tier 1/Tier 2 UAL rate	(1.37%)	2.47%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	55	57
Tier 1/Tier 2 dormant members	71	64
Tier 1/Tier 2 retirees and beneficiaries	61	57

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	5,137,769	5,084,185
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$2,728,522	$2,637,116
2. Employer reserves	6,840,709	6,390,942
3. Benefits in force reserve	3,339,513	2,546,298
4. Total market value of assets ***(1. + 2. + 3.)***	**$12,908,743**	**$11,574,356**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$11,574,356
2. Regular employer contributions	296,334
3. Benefit payments and expenses	(524,494)
4. Adjustments[2]	15,767
5. Interest credited	1,546,781
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$12,908,743**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	217,527	118,439
Tier 2 Police & Fire	0	0
Tier 2 General Service	133,563	128,266
Total	**$351,090**	**$246,705**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$266,962	$351,090	$84,128

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	4,903,811	5,176,134
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	2,363,650	1,651,632
▪ **Total Active Members**	**$7,267,461**	**$6,827,766**
Dormant Members	1,587,665	2,165,454
Retired Members and Beneficiaries	5,627,541	4,631,044
Total Actuarial Accrued Liability	**$14,482,667**	**$13,624,264**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$14,650,612	$14,482,667	($167,945)

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$14,482,667	$13,624,264
2. Actuarial value of assets	12,908,743	11,574,356
3. Unfunded accrued liability *(1. – 2.)*	1,573,924	2,049,908
4. Funded percentage *(2. ÷ 1.)*	89%	85%
5. Combined valuation payroll	$5,137,769	$5,084,185
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	31%	40%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$1,573,924	$113,920
Total				**$1,573,924**	**$113,920**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$13,624,264
b. Normal cost at December 31, 2011	246,705
c. Benefit payments during 2012	(520,389)
d. Interest at 8.0% to December 31, 2012	1,088,862
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	14,439,442
f. Change in actuarial accrued liability due to assumption, method, and plan changes	(167,945)
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	14,271,497
2. Actuarial accrued liability at December 31, 2012	14,482,667
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(211,170)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	11,574,356
b. Contributions for 2012[1]	296,334
c. Benefit payments and expenses during 2012	(524,494)
d. Interest at 8.0% to December 31, 2012	916,822
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	12,263,018
5. Actuarial value of assets at December 31, 2012	12,908,743
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	645,726
7. Total actuarial gain/(loss) *(3. + 6.)*	**$434,556**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$2,049,908**
2. Expected increase	126,517
3. Liability (gain)/loss	211,170
4. Asset (gain)/loss	(645,726)
5. Change due to changes in assumptions, methods, and plan provisions	(167,945)
6. UAL at December 31, 2012 *(1. + 2. + 3. + 4. + 5.)*	**$1,573,924**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	217,527	1,520,925	14.30%	118,439	1,566,831	7.56%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	133,563	1,248,890	10.69%	128,266	1,224,076	10.48%
Total	**$351,090**	**$2,769,815**	**12.68%**	**$246,705**	**$2,790,907**	**8.84%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$1,573,924	$2,049,908
2. Next year's Tier 1/Tier 2 UAL payment	113,920	142,405
3. Combined valuation payroll	5,137,769	5,084,185
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	2.22%	2.80%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.68%	8.84%
b. Tier 1/Tier 2 UAL rate	2.22%	2.80%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.03%	11.77%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.31%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.31%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.66%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	89%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.31%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	11.31%
7. July 1, 2015 total pension rate, before adjustment	15.03%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.72%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	2.22%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.50%)
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	11.31%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.68%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.68%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.31%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.68%	8.84%
b. Tier 1/Tier 2 UAL rate	(1.50%)	2.34%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	11.31%	11.31%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,520,925	$0	$1,520,925
Tier 2	1,248,890	0	1,248,890
Tier 1/Tier 2 valuation payroll	2,769,815	0	2,769,815
OPSRP valuation payroll	2,367,954	0	2,367,954
Combined valuation payroll	**$5,137,769**	**$0**	**$5,137,769**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	28	27	95	150	29	28	94	151
Police & Fire	0	0	0	0	0	0	0	0
Total	28	27	95	150	29	28	94	151
Active Members with previous service segments with the employer								
General Service	28	49	N/A	77	35	55	N/A	90
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	28	49	N/A	77	35	55	N/A	90
Dormant Members								
General Service	31	40	19	90	30	34	11	75
Police & Fire	0	0	0	0	0	0	0	0
Total	31	40	19	90	30	34	11	75
Retired Members and Beneficiaries								
General Service	55	6	1	62	52	5	0	57
Police & Fire	0	0	0	0	0	0	0	0
Total	55	6	1	62	52	5	0	57
Grand Total Number of Members	**142**	**122**	**115**	**379**	**146**	**122**	**105**	**373**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34		1	2							**3**
35-39		1	1	1						**3**
40-44	1	1	3	3	2					**10**
45-49		1	3	1	1					**6**
50-54		2	2	5	2	1				**12**
55-59		1	6	3		3				**13**
60-64			2	2	2	1				**7**
65-69				1						**1**
70-74										
75+										
Total	**1**	**7**	**19**	**16**	**7**	**5**	**0**	**0**	**0**	**55**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29	5	235
30-34	1	213
35-39	9	316
40-44	8	511
45-49	7	571
50-54	10	20
55-59	20	188
60-64	10	404
65-69	1	13
70-74		
75+		
Total	71	286

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	3	322
55-59	7	736
60-64	26	657
65-69	13	674
70-74	9	567
75-79	2	414
80-84		
85-89	1	626
90-94		
95-99		
100+		
Total	61	632

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Banks Fire District #13/2702
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

December 2013
Banks Fire District #13/2702

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

December 2013
Banks Fire District #13/2702

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Banks Fire District #13 -- #2702

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Banks Fire District #13 to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Banks Fire District #13.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Banks Fire District #13

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.14%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	4.00%	4.00%	4.00%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.74%**	**11.96%**	**16.06%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**18.30%**	**12.44%**	**16.54%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 85%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.14%	14.14%
Minimum July 1, 2015 Rate	11.14%	8.14%
Maximum July 1, 2015 Rate	17.14%	20.14%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$442,515	$423,754	($18,761)	104%	$139,618	(13%)
12/31/2008	339,877	457,508	117,631	74%	146,158	80%
12/31/2009	399,672	467,019	67,346	86%	154,254	44%
12/31/2010	446,830	511,823	64,993	87%	159,008	41%
12/31/2011	458,745	561,533	102,788	82%	169,149	61%
12/31/2012	539,106	634,391	95,285	85%	153,539	62%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Banks Fire District #13

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$95,285	$102,788
Allocated pooled OPSRP UAL	10,822	2,886
Side account	0	0
Net unfunded pension actuarial accrued liability	106,107	105,674
Combined valuation payroll	153,539	169,149
Net pension UAL as a percentage of payroll	69%	62%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,221	$4,382

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$20,182	$24,022
Tier 1/Tier 2 valuation payroll	153,539	169,149
Tier 1/Tier 2 pension normal cost rate	13.14%	14.20%
Tier 1/ Tier 2 Actuarial accrued liability	$634,391	$561,533
Actuarial asset value	539,106	458,745
Tier 1/Tier 2 Unfunded actuarial accrued liability	95,285	102,788
Tier 1/ Tier 2 Funded status	85%	82%
Combined valuation payroll	$153,539	$169,149
Tier 1/Tier 2 UAL as a percentage of payroll	62%	61%
Tier 1/Tier 2 UAL rate	4.00%	2.94%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	3
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	3	3

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	153,539	169,149
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$41,934	$33,737
2. Employer reserves	346,808	280,434
3. Benefits in force reserve	150,364	144,575
4. Total market value of assets ***(1. + 2. + 3.)***	**$539,106**	**$458,745**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2011 to December 31, 2012
1. Market value of assets at beginning of year	$458,745
2. Regular employer contributions	22,955
3. Benefit payments and expenses	(23,616)
4. Adjustments [2]	14,369
5. Interest credited	66,652
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$539,106**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$10,747	$13,110
Tier 1 General Service	0	0
Tier 2 Police & Fire	9,435	8,805
Tier 2 General Service	0	2,107
Total	**$20,182**	**$24,022**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$22,743	$20,182	($2,561)

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$208,791	$156,304
▪ Tier 1 General Service	12,789	11,806
▪ Tier 2 Police & Fire	131,543	102,350
▪ Tier 2 General Service	27,884	28,130
▪ **Total Active Members**	**$381,007**	**$298,590**
Dormant Members	0	0
Retired Members and Beneficiaries	253,384	262,943
Total Actuarial Accrued Liability	**$634,391**	**$561,533**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$595,260	$634,391	$39,131

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$634,391	$561,533
2. Actuarial value of assets	539,106	458,745
3. Unfunded accrued liability *(1. – 2.)*	95,285	102,788
4. Funded percentage *(2. ÷ 1.)*	85%	82%
5. Combined valuation payroll	$153,539	$169,149
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	62%	61%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$95,285	$6,897
Total				**$95,285**	**$6,897**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$561,533
b. Normal cost at December 31, 2011	24,022
c. Benefit payments during 2012	(23,431)
d. Interest at 8.0% to December 31, 2012	45,907
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	608,031
f. Change in actuarial accrued liability due to assumption, method, and plan changes	39,131
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	647,162
2. Actuarial accrued liability at December 31, 2012	634,391
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	12,771
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	458,745
b. Contributions for 2012[1]	22,955
c. Benefit payments and expenses during 2012	(23,616)
d. Interest at 8.0% to December 31, 2012	36,673
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	494,758
5. Actuarial value of assets at December 31, 2012	539,106
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	44,348
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$57,119**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$102,788**
2. Expected increase	10,485
3. Liability (gain)/loss	(12,771)
4. Asset (gain)/loss	(44,348)
5. Change due to changes in assumptions, methods, and plan provisions	39,131
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$95,285**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$10,747	$80,520	13.35%	$13,110	$77,799	16.85%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	9,435	73,019	12.92%	8,805	71,686	12.28%
Tier 2 General Service	0	0	0.00%	2,107	19,664	10.72%
Total	**$20,182**	**$153,539**	**13.14%**	**$24,022**	**$169,149**	**14.20%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$95,285	$102,788
2. Next year's Tier 1/Tier 2 UAL payment	6,897	7,661
3. Combined valuation payroll	153,539	169,149
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	4.49%	4.53%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.14%	14.20%
b. Tier 1/Tier 2 UAL rate	4.49%	4.53%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.76%	18.86%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.14%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.14%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.83%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	85%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.14%
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	17.14%
7. July 1, 2015 total pension rate, before adjustment	17.76%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.62%)
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	4.49%
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.87%
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	17.14%
12. Tier 1/Tier 2 retiree healthcare rate	0.56%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.14%
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.14%
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.14%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	**July 1, 2013 Rates calculated as of December 31, 2011**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.14%	14.20%
b. Tier 1/Tier 2 UAL rate	3.87%	2.81%
c. Multnomah Fire District #10 rate	0.13%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	17.14%	17.14%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$80,520	$80,520
Tier 2	0	73,019	73,019
Tier 1/Tier 2 valuation payroll	0	153,539	153,539
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$153,539**	**$153,539**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	1	0	1
Police & Fire	1	1	0	2	1	1	0	2
Total	1	1	0	2	1	2	0	3
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	1	0	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	2	0	0	2	2	0	0	2
Total	3	0	0	3	3	0	0	3
Grand Total Number of Members	**4**	**2**	**0**	**6**	**5**	**2**	**0**	**7**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39				1						**1**
40-44										
45-49										
50-54										
55-59				1						**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	496
70-74	2	698
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	3	630

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members’ regular account balances starting in 2014. 7.75% compounded annually on members’ variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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December 2013

Yamhill Fire Protection District/2878
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2015 through June 30, 2017 will be calculated in the December 31, 2013 actuarial valuation.

This report reflects the changes made to the System's benefit provisions during 2013, as summarized later in the report. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

December 2013
Yamhill Fire Protection District/2878

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2013.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2015 to June 2017 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

December 2013
Yamhill Fire Protection District/2878

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2012

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Yamhill Fire Protection District -- #2878

December 2013

CONTENTS

Executive Summary

Milliman has prepared this report for Yamhill Fire Protection District to:

- Provide summary December 31, 2012, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2012, on estimated employer-specific contribution rates effective July 1, 2015 through June 30, 2017,
- Provide employer-specific valuation results for on side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2012, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2012, system-wide valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Yamhill Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2012, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory Employer Rates Calculated as of December 31, 2012, for Yamhill Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.33%	7.36%	11.46%
Tier 1/Tier 2 UAL rate [1]	0.13%	0.13%	0.13%
OPSRP UAL rate	0.60%	0.60%	0.60%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.06%**	**8.09%**	**12.19%**
Retiree Healthcare			
Normal cost rate	0.08%	0.00%	0.00%
UAL rate	0.48%	0.48%	0.48%
Net retiree healthcare rate	**0.56%**	**0.48%**	**0.48%**
Total net employer contribution rate	**15.62%**	**8.57%**	**12.67%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2015 to June 2017 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2012 is 0%.

Funded Status as of December 31, 2013	70% to 130%	Under 60% or Over 140%
July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate	14.46%	14.46%
Minimum July 1, 2015 Rate	11.46%	8.46%
Maximum July 1, 2015 Rate	17.46%	20.46%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The most recent rate-setting actuarial valuation, conducted as of December 31, 2011 and published in September 2012, provided information to assist in completion of the required plan-related financial reporting disclosures, including presenting the pension-related Annual Required Contribution (ARC) and Contractually Required Contribution (CRC) for the July 1, 2013 to June 30, 2015 biennium.

As directed by Senate Bill 822, enacted in May 2013, the actual pension rates paid by employers effective beginning July 1, 2013 were reduced compared to the contribution rates originally calculated in the December 31, 2011 actuarial valuation. However, because the full December 31, 2011 actuarial valuation was completed before the legislative changes, the individual employer ARC provided with that valuation does not reflect any adjustment for either Senate Bill 822 or the subsequent Senate Bill 861.

Accounting information provided in this and prior valuation reports are for the purpose of completing the reporting and disclosure requirements of GASB 27. In June 2012 the GASB issued Statement No. 68, which will replace GASB 27 and govern employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the current reporting requirements, including the ARC. Under the new rules, employers will be required to record a balance sheet liability for unfunded pension obligations.

The accounting information provided in future actuarial valuation reports will be revised to reflect the transition to the new GASB standard.

Executive Summary

Accounting Information (continued)

Required Supplementary Information

Schedule of Funding Progress

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2007	$0	$0	$0	0%	$0	0%
12/31/2008	0	0	0	0%	0	0%
12/31/2009	0	0	0	0%	0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	0	0	0	0%	31,785	0%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of the December 31, 2011 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2011 to June 30, 2013	0.59%	0.50%	0.50%
July 1, 2013 to June 30, 2015	0.56%	0.48%	0.48%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

Yamhill Fire Protection District

	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
T1/T2 UAL	$0	$0
Allocated pooled OPSRP UAL	2,240	0
Side account	0	0
Net unfunded pension actuarial accrued liability	2,240	0
Combined valuation payroll	31,785	0
Net pension UAL as a percentage of payroll	7%	0%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$667	$0

UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2012	December 31, 2011
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	14.33%	0.00%
Tier 1/ Tier 2 Actuarial accrued liability	$0	$0
Actuarial asset value	0	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	0	0
Tier 1/ Tier 2 Funded status	0%	0%
Combined valuation payroll	$31,785	$0
Tier 1/Tier 2 UAL as a percentage of payroll	0%	0%
Tier 1/Tier 2 UAL rate	0.13%	0.00%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2012	**December 31, 2011**
General service normal cost	$213.5	$165.3
OPSRP general service valuation payroll	2,899.3	2,634.7
General service normal cost rate	7.36%	6.27%
Police and fire normal cost	$40.1	$27.7
OPSRP police and fire valuation payroll	349.9	307.9
Police and fire normal cost rate	11.46%	9.00%
Actuarial accrued liability	$1,795.6	$986.4
Actuarial asset value	1,190.0	840.5
Unfunded actuarial accrued liability	605.5	145.9
Funded status	66%	85%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	7%	2%
UAL rate	0.60%	0.15%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2012**	**December 31, 2011**
Normal cost	$4.4	$5.8
Tier 1 / Tier 2 valuation payroll	5,341.7	5,607.9
Normal cost rate	0.08%	0.10%
Actuarial accrued liability	$471.8	$461.1
Actuarial asset value	291.6	239.6
Unfunded actuarial accrued liability	180.2	221.5
Funded status	62%	52%
Combined valuation payroll	$8,590.9	$8,550.5
UAL as a percentage of payroll	2%	3%
UAL rate	0.48%	0.49%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	**Continuing**	**Total**
1. Side account as of December 31, 2011	**N/A**		
2. Deposits made during 2012		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2012			
5. Side account earnings during 2012			
6. Side account as of December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2012	December 31, 2011
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2012	December 31, 2011
1. Total side account	$0	$0
2. Combined valuation payroll	31,785	0
3. Amortization factor	11.272	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2012	December 31, 2011
1. Member reserves[1]	$0	$0
2. Employer reserves	0	0
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$0**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2011 to December 31, 2012
1.	Market value of assets at beginning of year	$0
2.	Regular employer contributions	0
3.	Benefit payments and expenses	0
4.	Adjustments[2]	0
5.	Interest credited	0
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$0**

[1] *For both the December 31, 2012 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2012	December 31, 2011
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2012.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

	December 31, 2012	December 31, 2011
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$0**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2012.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability	$0	$0
2. Actuarial value of assets	0	0
3. Unfunded accrued liability *(1. – 2.)*	0	0
4. Funded percentage *(2. ÷ 1.)*	0%	0%
5. Combined valuation payroll	$31,785	$0
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	0%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumptions, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized balances as of December 31, 2012 have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	$0	$0
Total				**$0**	**$0**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	$0
b. Normal cost at December 31, 2011	0
c. Benefit payments during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)*	0
2. Actuarial accrued liability at December 31, 2012	0
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	0
b. Contributions for 2012[1]	0
c. Benefit payments and expenses during 2012	0
d. Interest at 8.0% to December 31, 2012	0
e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)*	0
5. Actuarial value of assets at December 31, 2012	0
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	0
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$0**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2011, is provided below.

1. UAL at December 31, 2011	**$0**
2. Expected increase	0
3. Liability (gain)/loss	0
4. Asset (gain)/loss	0
5. Change due to changes in assumptions, methods, and plan provisions	0
6. UAL at December 31, 2012 ***(1. + 2. + 3. + 4. + 5.)***	**$0**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2012			December 31, 2011		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**14.33%**	**$0**	**$0**	**0.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total Tier 1/Tier 2 UAL	$0	$0
2. Next year's Tier 1/Tier 2 UAL payment	0	0
3. Combined valuation payroll	31,785	0
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.00%	0.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	N/A
b. Tier 1/Tier 2 UAL rate	0.00%	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	14.46%	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2013 through June 30, 2015, develops the maximum and minimum contribution rates effective July 1, 2015 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.46%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.46%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. July 1, 2015 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. July 1, 2015 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. July 1, 2015 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. July 1, 2015 Tier 1/Tier 2 UAL rate, before collar	N/A
10. July 1, 2015 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. July 1, 2015 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. July 1, 2015 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. July 1, 2015 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate. The rates calculated as of December 31, 2011, in the table below are prior to reflecting the effects of Senate Bills 822 and 861.

	Advisory July 1, 2015 Rates calculated as of December 31, 2012	July 1, 2013 Rates calculated as of December 31, 2011
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.33%	N/A
b. Tier 1/Tier 2 UAL rate	0.00%	N/A
c. Multnomah Fire District #10 rate	0.13%	N/A
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.44%)*	14.46%	N/A

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	0	31,785	31,785
Combined valuation payroll	**$0**	**$31,785**	**$31,785**

Employer Member Census

	December 31							
	2012				2011			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	1	1	0	0	0	0
Total	0	0	1	1	0	0	0	0
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2012

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2012

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2012, valuation can be found in the system-wide report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007, and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL will be re-amortized over a 20 year period as of the December 31, 2013, rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.75% compounded annually on system assets.
Interest crediting	7.75% compounded annually on members' regular account balances starting in 2014. 7.75% compounded annually on members' variable account balances starting in 2014.
Consumer price inflation	2.75% per year.
Future general wage inflation	3.75% per year.
Healthcare cost inflation	Ranging from 8.0% in 2013 to 4.7% in 2083.
OPSRP Administrative Expenses	$5.5 million added to OPSRP normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2011 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Valuation Procedures

- **Actuarial Cost Method**

  The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

- **Tier 1/Tier 2 UAL Amortization**

  In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

- **Contribution Rate Stabilization Method**

  The "grade-in range" over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%.

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting rate was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

- **OPSRP Administrative Expenses**

  Assumed administrative expenses were reduced from $6.6 million per year to $5.5 million per year.

Changes in Demographic Assumptions

- **Healthy Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience.

- **Disability, Retirement from Active Status, and Termination**

  Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

A complete summary of all assumptions used as part of the December 31, 2012 actuarial valuation is contained in the system-wide report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2011, actuarial valuation:

- Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.
- Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.
- Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Required Contribution (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Glossary

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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